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volume 8 / number 6

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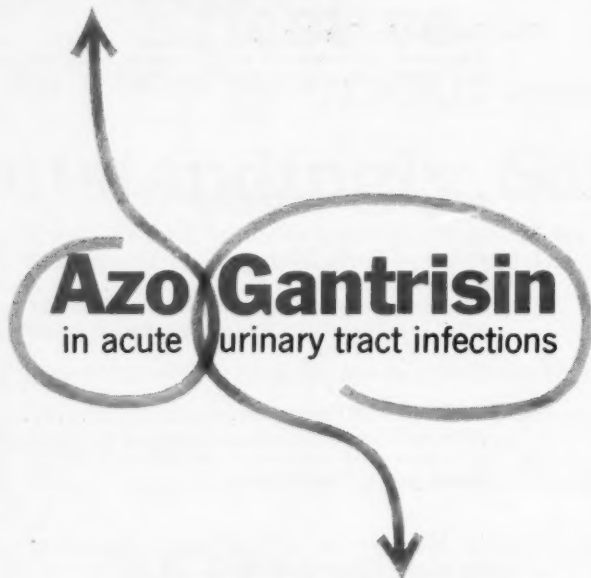
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The Obvious in Obesity

EDWIN MATLIN, M.D., Garden City, New York

► *Obese patients require the assistance of a physician to reduce. If people could lose weight by themselves, there would be no fat people. Attention to details plus specific dietary instructions are essential. Patients must return at weekly intervals for weight checks, reassurance, and discussion.* ◀

Obesity is one of the problems that can only be successfully handled by the physician who will pay attention to details. This presentation of a few simple facts and a few simple, but essential, details has as its aim the renewal of interest which the general practitioner should have in weight reduction.

This paper is based on observations in a series of more than 300 patients whose chief complaint was obesity, and who voluntarily presented themselves for aid in losing weight; and 102 patients who were advised to lose weight for medical reasons, including diabetes and hypertension. Of these 402 patients, 75 did not continue treatment. These

are not classified as failures; rather, they belong to the small class of difficult patients who refuse to cooperate with a doctor. The remaining 327 patients lost from 15 to 150 pounds. The average loss in the first seven to 14 days was eight pounds. Thereafter, one to three pounds per week was considered adequate.

My experience runs the gamut of weight-reducing aids, such as amphetamine in the *dextro* and/or *levo* forms (in regular and prolonged-release single dosage forms), bulk-forming material, and diets, with and without calorie counters, with and without weight graphs designed to enable the patient to keep accurate checks on his progress, or often his lack of progress.

Obesity, in most of the cases that are seen in general practice, is due to overeating, i.e., a disproportion between the amount of food consumed and the amount metabolized, even though some people require less

for their size than others.

Why Help Is Needed

The most difficult point to realize, for physicians who have difficulty in getting people to reduce, is that if people could lose weight by themselves, there would be no fat people.

Fat patients need help, and they need it regularly, consistently, and frequently. They need it in the form of praise, "cussing out," pleading, bribing, and even hair-pulling (often the doctor's hair which he, in despair, is pulling out himself).

The first duty of the physician is to impress upon the patient the seriousness of obesity. It is not sufficient to suggest that he lose weight, but rather to state definitely, and without humor, that potentially the obese are in trouble if they do not reduce. The main question for the patients to decide is whether they would like to lose it now, while they are still healthy (if this is the case), or would they like to wait until they become ill.

Causes of Overeating

Psychologists distinguish between hunger and appetite by stating that hunger is the annoying sensation, the feeling of emptiness that is felt in the stomach, while appetite is the desire for food to satisfy a craving

not related to hunger and food taken gives a pleasurable sensation. One can be hungry enough to eat raw potatoes and bread, but not receive satisfaction; or, he may eat a piece of French pastry after stuffing himself to satiation. Hunger is usually a gastric sensation, but after a gastrectomy it may be caused by duodenal contractions, and is not necessarily related to the nutritional state of the body, to the blood sugar, or to the absence or presence of food in the intestines. The interplay of factors which determine hunger is still not well known, but it is believed they are physiologic, neurologic, and psychic.

Hunger is an inborn reaction, but appetite is an acquired activity based upon habits of eating. Appetite is probably centered in the cerebrum, and related to taste, flavor, manner of preparation and presentation of food; and even culture, since various cultures are given to different foods.

Appetite can be aroused by any of the senses that can appreciate food such as sight, smell, taste, or even the thought of food. Any of the disturbing emotions such as fear, grief, or anxiety, may interfere with appetite as can the appetite stimulants. This loss of appetite may not interfere with true hunger,



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but because the appetite may vanish, the intake of food may be seriously diminished. The unconscious drive to eat may be so great that it approaches the drive of the alcoholic, and in his torment he will do almost anything rather than give up excess eating.

That most individuals have the same drives to a lesser degree is evidenced by the fact that most people will eat more when under tension, when bored, when nervous or idle, and many will eat more when tired. Although unknown to the patient, overeating may be manifest either in his spoken word or in the language of the body as revealed by his words. The person who is bored because of his empty life may be trying to fill his stomach (and his life) with food. An individual who is love-starved may try to fill the void with food.

It may be possible to give the patient an understanding of his emotional problems, for with insight the problem often becomes more simple, even though unusual stress may cause backsliding.

There is often some correlation between the type of food in which the patient indulges, and the type of emotional difficulty. If the patient feels unloved and unwanted, there is a tendency to indulge in sweets in large

quantities; while sexual difficulty, boredom and fatigue are manifested by a desire for highly spiced foods. If the cause of the difficulty is not recognized by the patient, he will eat anything he can get his hands on. With a full stomach comes a pleasant feeling of comfort and sleepiness, during which the worries of the day diminish in size and importance.

Another cause of overeating is overemphasis on the importance of food by the parents who feel that a fat baby is a sign of adequate care, and whose prayer is, "Lord, make my baby fat and me skinny." Eating habits of youth may be continued past the period during which activity is sufficient to burn up the excess.

Business people know the value of a good meal in pleasant surroundings to clinch a deal. Many people will eat to avoid the monotony of long trips on the road, or the boredom of a hotel room.

People who handle food are subject to overeating. People who are confined to bed after surgery may continue to eat large quantities of food as they did before, but without burning it up, and thus put on weight. At puberty, and during pregnancy and the climacteric, new fears and anxieties create tensions which may lead to overeating.

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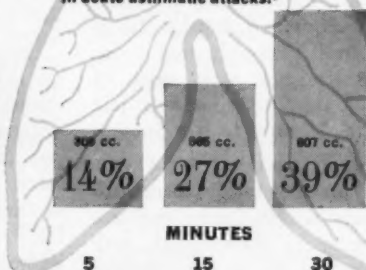
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REFERENCES: 1. Kessler, F.: Connecticut M.J. 21:205 (March) 1957. 2. Schlager, J.; McGinn, J.T., and Hennessy, D.J.: Am. J. Med. Sci. 223:296 (March) 1957. 3. Kessler, F.: Med. Times (Oct.) 1959. 4. Burbank, B.; Schlager, J., and McGinn, J.: Am. J. Med. Sci. 234:28 (July) 1957. 5. Spielman, A.D.: Ann. Allergy 15:270 (June) 1957. 6. Greenbaum, J.: Ann. Allergy (May-June) 1958. 7. Wastler, S.H., and Shack, J.A.: J.A.M.A. 143:736 (1950). 8. Bickerman, H.A., and Barack, A.L., in Model, W.: Drugs of Choice 1960-1961, St. Louis, The C.V. Mosby Company, 1960, p. 516. 9. Wilhelm, R.E., Conn, H.F.: in Current Therapy—1961, Philadelphia, W.B. Saunders Company, p. 417.

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Overeating may be a defense mechanism, since obesity will confirm the belief that a girl may have that she is unattractive, or if there is a sexual mechanism which cannot be faced, she will make herself unattractive to avoid the problems which might arise with beauty, or at least attention from the opposite sex.

Why Some Patients Fail

Because of the underlying emotional defect which may be strong, some are unable to resist food, and strong attempts produce conflicts and other methods of release from conflicts. These may be insomnia, increased tension, fatigue, and rarely a true nervous breakdown.

The incentive must be strong, and the woman who presents herself saying that her husband or her boy friend thinks she is too fat, will probably not do as well as the one who says, "I bought a new bathing suit last year and I want to get into it this summer."

The man who enjoys tremendous meals of rich foods, and is a social eater in good health, will probably not do so well before as after his first coronary artery attack. The one with a wear-and-tear type of arthritis, or painful flat feet, will probably do better than the one with no discomforts.

Assuming the incentive is present, it will take a tremendous amount of will-power and perseverance to change long-established eating habits.

The most difficult person, and the one who will probably put the largest drain on the physician's aspirin bottle, is the one who insists that he eats nothing, and can relate exactly what he eats every day, what he has eaten for the past week, and who eats nothing for days on end. Such people are unconsciously or consciously lying; they refuse to face the basic fact that no one gains weight except by overeating. Get rid of them fast, to preserve your sanity. They will confront you with a list of doctors who helped them for two weeks and then they failed to lose any more. In fact, they gained on the identical diet on which they lost weight originally.

Overeating in some individuals is the response to stress; in others it may lead to ulcer, hypertension, colitis, etc. One who has tried unsuccessfully to reduce may have a guilty conscience and fail to respond unless reassured that there is no reason for a feeling of guilt; that it is not due to weakness of will power, but that with assistance and understanding and mutual cooperation, he will lose.

It is the introverted adult with

few activities and few friends who turns to overeating as an infantile regressive tendency in which he finds satisfaction.

The Physician Should Know

Most people in this era know the basic facts of caloric values and energy consumption, but they err in not realizing that salad dressings and oils are murder, as are alcoholic beverages. So, to avoid confusion in presenting them with a diet—and almost any low-calorie diet will do — I list only the allowable foods. There are no don'ts on it, but at the bottom of the page in large letters is the statement, "If it is not on this sheet, you can't have it." It is remarkable how many phone calls and useless talk this little phrase has eliminated.

The patient who skips breakfast has a tendency to grab a snack at the coffee break, and a small thing like peanut butter, crackers, and a coke are hardly enough to tell the doctor about. It is emphasized that all meals should be eaten to avoid the in-between hunger.

There will be occasional lapses from the diet, and while the doctor anticipates them, he does not welcome them. If the patient does experience a lapse, he is not to fear that the doctor will reject him, but instead, the relapse

should act as an incentive to do better for a longer period the next time.

The patient should not look upon obesity as a sign of health, and he should pay no attention to well-meaning friends or relatives who comment on how thin he looks, and ask, "Have you been sick?"

All of this requires close supervision by the doctor, and that means weekly visits. During these visits, the patient is weighed, given a chance to ventilate, and is also given an injection—its nature is immaterial because (except in salt and water retention, when a mercurial diuretic is given) its only function is to assure the patient that he is not doing it all alone—he is being given help.

In my experience, patients who stay away lose weight more slowly and have a greater tendency to lapse after attaining the desired weight. This takes place in direct proportion to the time interval between visits. Backsliders get the feeling that they can cheat this week and go on the diet next week.

Because of the general inability to stick to a diet for any length of time, even to plan a diet, so-called "crash diets" are the vogue: "Two weeks, lose 10 pounds." Such a diet may suc-

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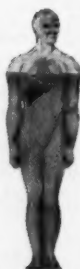
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ceed for two weeks because in the first two weeks it is easy to lose weight. Some people will lose seven to 10 pounds the first week. This leads to enthusiasm for hardboiled eggs or yogurt, or whatever the fad is, but because of the unpalatability, or the failure to lose additional weight, the diet is abandoned. They then console themselves with, "All members of my family are fat." Of course they are. Eating habits are handed down, and the fat man eats as much as his fat brother, mother, and father ate.

Physicians often hear, "I eat exactly what I ate five years ago and I haven't gained an ounce." This is a statement difficult to prove, but in those cases where it appears to be true, the individual hits a point at which his calorie intake began to put on weight, and when it reached the point where it just balances the metabolic demands of his body, his weight stabilizes.

While exercise is usually desirable in all patients, it can never hope to substitute for not eating that pie or cake, and everyone has their own pet remark like, "a 10-mile walk to use up the chocolate sundae."

Studies have shown that after several weeks' loss of weight, some patients begin to retain salt and fluid while losing fat, the weight remaining stationary. The

patient should be told of this possibility, so if it occurs he will not become discouraged. A small dose of a mercurial diuretic often starts a dramatic loss of weight again. In women, the premenstrual tendency to retain water and salt and weight can be handled by a mercurial as needed.

It is not unusual for patients on a low-calorie diet to feel low, irritable, and tired during the first two or three weeks. This is discussed with them when they begin the diet.

The chief advantage of the C.N.S. stimulants of the amphetamine group is that in addition to depressing appetite, by mood elevation the tension and hostility are lowered and the tendency to over-eat is decreased.

Any diet must be low in calories. It must approximate a normal diet so that, while reducing, the patient has an opportunity to learn how to eat properly; thus, it must be of sufficient bulk and high enough in protein to give a sensation of fullness and, of course, it must not interfere with the normal process of either the digestive tract or the patient's life.

The patient must be told that it is not unusual to begin to gain weight again if the same dietary indiscretions are committed, and that he is to weigh himself week-

ly at the same time of day, and report as soon as he has gained eight pounds. It appears that 10 pounds is a lot, five pounds not enough, but eight pounds is a safe figure at which he can return to the doctor without a feeling of guilt.

Conclusions

1. Obese patients require assistance. If people could lose weight by themselves, there

would be no fat people.

2. Attention to details plus specific dietary instructions are essential.

3. Patients must return at weekly intervals for weight checks, reassurance, and discussion.

4. The specific medication is of lesser value than the rapport so long as it interferes with appetite and does not excite the patient. ◀

Powdered Gelatin Foam in Treatment of Stasis Ulcers

Of 142 patients (aged 32 to 81) with stasis ulcers of the leg seen over 3 years, duration of ulcer was 2 months to 20 years, mean duration 6½ years. Time of treatment with powdered gelatin foam (Gelfoam) was 2 weeks to 7 months, mean 2 months.

Hydrocortisone with neomycin ointment was applied to the eczema at the rim of the ulcer, a sterile, purified, specially processed gelatin was packed into the ulcer and a sterile pressure dressing was applied. Dressings were changed twice weekly until improvement occurred, then weekly until healed or until treatment was discontinued. At the time of dressing changes, the Gelfoam was not removed if it was adherent to the ulcer base;

it was removed when it was attached only to the margin.

Infected ulcers were treated initially with soothing compresses and systemic antibiotic or chemotherapy, followed by the topical use of antibiotic ointments with a low sensitizing index. After the infection was controlled, the described regimen was carried out.

Of the 13 patients not healed, 4 did not complete treatment, 2 were diabetic, one had Hodgkin's disease, and 3 had extremely poor circulation. Results were not markedly affected by the chronicity of the ulcer, although a longer period of treatment was required in some.

Nierman, M. M., *J. Indiana M.A.*, 53:1317-1320, 1960.

Importance of Early Diagnosis and Treatment of Gastric Carcinoma

HU C. MYERS, M.D., *Philippi, West Virginia*

►From a study of 127 patients with gastric carcinoma, it was found that natural attrition eliminated all but 8.3 per cent of untreated patients in 10 months. Without early operation, few would be alive to receive any type of treatment after a 10-month period. Adequate operation must be done without delay. ◀

Until the discovery of a chemical or physical agent which will completely destroy neoplastic cells, or at least their malignant properties, and not materially injure adjacent normal cells, treatment methods which are now available or which may be developed in the future must be used to best advantage. The fact that present tools are not perfect does not relieve the physician of the responsibility of using them, and using them properly.

No cure for advanced carcinoma of the stomach has been found, but almost one-third of all patients who have a gastric resection for this disease are alive and well with no evidence

of recurrence after five years. Unfortunately some two-thirds of all such patients who come to the surgeon have advanced disease and are, therefore, hopeless as far as resection or cure is concerned. After a period of progress in diagnosis and treatment in the past two decades, a plateau in end results seems to have been reached. Further improvement seems to await the application of a new or unused principle in diagnosis or treatment.

It does not seem that further progress will be possible by the use of the usual surgical attack in anaplastic carcinomas which spread rapidly. Neither does it seem that extending the operation to include more of the stomach or parts of contiguous organs will improve results. The only remaining opportunity for advance would appear to be earlier diagnosis and treatment, which certainly has not been given adequate trial.

Material and Methods

To determine whether operation performed at an earlier stage of the disease will give a higher survival rate, a study was made of pertinent data in the records of 127 patients having gastric carcinoma which were seen by our group in the years 1936-1960, inclusive.

The relationship of duration of symptoms to the length of survival of the patient was not clear-cut partly because of two reasons:

1. Slightly over one-third of the tumors were anaplastic, grew rapidly, showed early dissemination and, because of these characteristics, had a low cure rate.

2. A small percentage was of very low grade malignancy, grew slowly, metastasized late, and, therefore, had a high cure rate even when operation was delayed.

At least three different forms of the disease exist, and to compare groups of cases properly, the three should be separated. No acceptable criteria have yet been developed to accomplish this purpose, microscopic grading and other methods having proved inadequate. Since no series of cases has yet been large enough or selective enough to give conclusive answers, it is necessary to rely either on

theory alone or to accept the results of smaller series which can only give trends.

Results of Study

In spite of the variations in degree of malignancy which makes comparison difficult, the direction in this small series of cases was toward longer survival and more cures with earlier diagnosis. In a more definite way, the results tend to refute the opposite theory that early diagnosis and treatment are of no significance.

Several interesting and pertinent facts emerged from the study of these cases. One was that natural attrition eliminated all but 8.3 per cent of untreated patients in a period of 10 months from the onset of symptoms. Thus, without early operation only a very few would have been alive to receive the benefit of any type of treatment after a 10-month period, and thus later treatment could not possibly have been as effective. The 5-year survival without evidence of recurrence was 30.3 per cent of all patients having resections, or 10.7 per cent of all cases. From 1936 until 1945, patient delay of one month or more after the onset of symptoms was found to be 77 per cent. From 1946 to 1954, delay was reduced to 40 per cent. From 1955 to 1959 pa-



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tient delay had gone up again and was 78 per cent. In view of the extensive educational program of the American Cancer Society and other organizations it is difficult to see why patients are now delaying as much as they did before the educational program was started.

Early symptoms of gastric carcinoma were found to be indigestion, anorexia, feeling of fullness in the epigastrium, and eructation of gas. While studies such as gastric analysis, tests for blood in the stools, and exfoliative cytology gave suggestive evidence of the disease, the final diagnosis was made by roentgenographic studies or by exploratory celiotomy.

Responsibility of Physician

Five individuals or groups who have vital roles in the early treatment of gastric carcinoma include the educator of the laity, the patient, the professional educator, the generalist who first sees the patient, and the surgeon. In an individual case the number is reduced to three: the patient, the family physician, and the surgeon. The physician who first sees the patient is the one who determines the fate of that individual more

than any other person. It is he who must decide whether roentgen studies are necessary. It is he who gives the patient a prolonged course of medical treatment and thus reduces his chances of cure, or who demands prompt explanation for irregularities in the gastric outline as shown in the roentgenograms.

No large series of cases has yet been reported where the diagnosis was made when early symptoms only were present. No figures are available to definitely prove or disprove the value of early diagnosis, but this study indicates that early diagnosis provides the best hope for improvement in results.

Unless and until proof is adduced to the contrary, it would seem logical to redouble efforts to see that patients with persistent suggestive roentgen evidence of gastric carcinoma which does not disappear with a short course of treatment with anticholinergic drugs, have adequate operation without delay. This procedure holds the best present hope for improvement in the treatment of gastric carcinoma, and would probably double the present cure rate if put into effect. ◀

Hernias Need Not Recur

MORRIS JOSEPH, M.D., F.A.C.S.,* Passaic, New Jersey

►Nylon mesh has been found an excellent agent for the repair and prevention of recurrence of hernia. The material is easy to handle, requires no special skill, and can be easily approximated to the fascia. Incisions through the nylon can be made with impunity just as through a fascial layer.◄

Since the dawn of modern surgery one of the great bugaboos of surgeons has been the hernia recurrence problem. After 1889 the plan of rearrangement of anatomic structures proximate to the hernia area was described. Eventually, grafts from other areas, such as the fascia lata from the thigh, were attempted. All of the procedures using endogenous materials resulted in a considerable morbidity and hernia recurrences requiring further surgery were frequent.

The use of tantalum became popular a number of years ago because it offered the advantages of withstanding absorption

and degeneration which followed use of endogenous material and because the percentage of cures was greatly improved. However, in 1954 it was reported that often deterioration and fragmentation of tantalum caused unfortunate and at times serious complications.¹ Others² reported more favorable results.

Nylon mesh (Crinoplate), first used³ in France about 1944, came to my attention in 1951. At the time, no United States manufacturer had attempted the production of nylon mesh for hernia repair. This fine, closely knitted nylon with hemmed edges is produced in six sizes and comes prepared in four separate wrappings sterile and ready for use.

The nylon plaque has been used since 1951 in cases ranging from primary, unoperated difficult direct hernias to very large ventral hernias (usually follow-

*Emeritus Senior Attending Surgeon, Passaic General Hospital; Courtesy Attending Surgeon, St. Mary's Hospital, Passaic, N. J. and Paterson General Hospital, Paterson, N. J.

1. Smith, R. S., *West. J. Surg., Obst. & Gynec.*, 62:1-6, 1954.

2. Koontz, A. R., *South. Med. & Surg.*, 16: 1143-1148, 1950.

3. Acquaviva, D. E. & Bourret, P., *J. Soc. chir. Marseille*, June, 1944.



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TABLE 1
SUMMARY OF PROCEDURES UTILIZING NYLON

CASE	SEX	AGE	DATE	TYPE OF OPERATION	RESULT
1.	F	56	10/16/51	Postoperative hernia	No followup
2.	F	44	2/13/52	" "	Excellent
3.	F	58	2/20/52	" "	"
4.	M	34	4/18/52	" "	"
5.	F	65	5/1/52	" "	"
6.	F	58	6/5/52	" "	"
7.	F	45	9/29/52	" "	"
8.	M	65	2/5/53	Double recurrent inguinal hernia	"
9.	M	57	11/9/53	Postoperative hernia	"
10.	M	56	1/15/54	Recurrent ing. hernia	"
11.	M	45	1/25/54	Inguinal hernia	"
12.	F	42	2/8/54	Incisional hernia	"
13.	M	71	3/9/54	Double ing. hernia, epigastric hernia	"
14.	M	70	7/16/54	Double direct ing. hernia recurrent	"
15.	M	35	10/14/54	Direct r. ing. hernia recurrent	"
16.	M	48	9/10/57	Direct r. ing. hernia	"
17.	F	49	5/19/59	Umbilical hernia with intestinal obstruction	"
18.	M	74	5/26/59	Dehiscence following cholecystectomy 5/18/59	"
19.	F	63	9/3/59	Hernia following cholecystectomy 5/17/59	"
20.	M	76	2/2/60	Fecal fistula with diastasis recti and herniation	"
21.	F	62	7/6/60	Bilateral inguinal hernia	"
22.	F	47	9/8/60	(Very obese, 225 lbs.) Extensive ventral hernia following an acute cholecystectomy and evisceration 1/18/60. Large Crinoplasts had to be used.	"
23.	F	40	9/9/60	Large r. rectus hernia	"
24.	M	63	11/1/60	Extensive adhesions in l. u. quadrant	"
25.	F	63	12/6/60	Cholecystectomy	"
26.	M	42	12/12/60	Left direct inguinal hernia	"

ing previous operations). In the very large hernias in obese women, two large plaques were sewn together with fine black silk before attaching the nylon to the fascia. Silk did not cause the

discomfort and hazard of sharp suture material. Over a period of nine years, no hernia has recurred.

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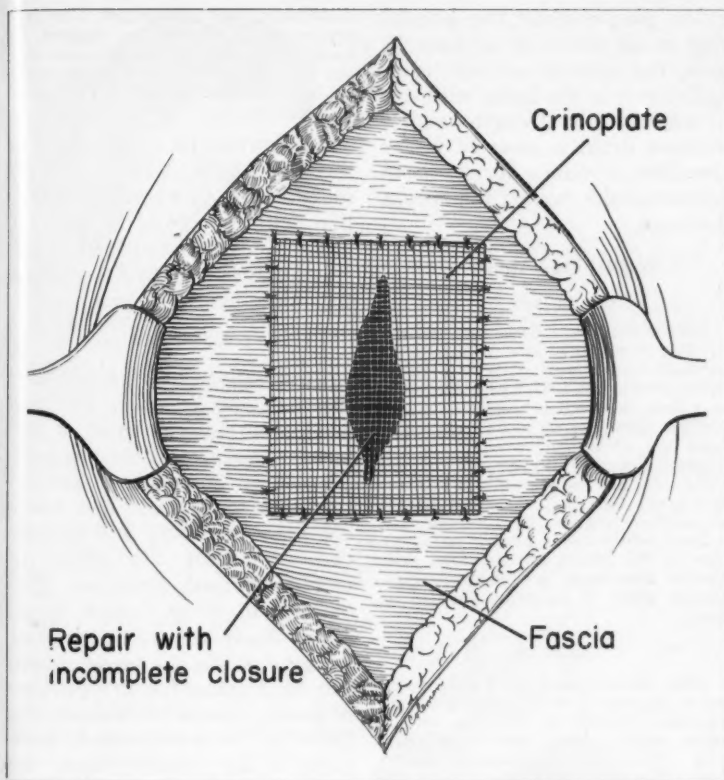


FIGURE 1

or intestinal adhesions are present in ventral hernias, the peritoneum need not be opened. The thin layer of fascio-peritoneal tissue can be left intact. The outer edge of the hernia ring is identified and scarified, then brought together as closely as

possible without tension. This approximation may be longitudinal or transverse and need not be complete. (Figure 1).

The abdominal wall is very simply protected by suturing the nylon to the fascia. It is important at this juncture that the

original article

nylon plaque clear the hernial ring at all points by at least $\frac{1}{2}$ inch. The nylon is sutured firmly and closely to the fascia with silk of appropriate strength, and a Penrose drain is inserted under the skin to remain for 24 to 48 hours to take care of the serous drainage.

Special Case Reports

CASE 14 AND 20

This patient was first operated on in 1954, at which time a double direct inguinal hernia was corrected, using nylon. In August, 1957, a prostatectomy was done in another hospital. He had profuse drainage of blood and urine from the abdominal wound, causing a breakdown of the repair on the right side. In August, 1959, an attempt was made to repair the right hernia at another hospital. This resulted in a fecal fistula and a further aggravation of the hernia on the right side. Repair was done in February, 1960. Result after 7 months: Closure is firm.

CASE 18

After cholecystectomy a dehiscence was repaired with through-and-through sutures of #2 silk, and a nylon onlay placed over the fascia. The patient had excessive gastric hemorrhage and vomiting during the following week, and administration of 20 pints of blood was necessary. He finally recovered and evidenced no sign of recurrence after 17 months.

CASE 19

Following a history of gallbladder disease over about eight years, this obese patient (weight, 190 lbs.) was operated on for an acute cholecystitis. Hernia of this area was evident about one month later and repair was done using a nylon plaque. General abdominal repair of a ventral hernia, done

previously, was still intact. The last repair is firm and the patient in excellent condition. Some excess nylon was excised under local anesthesia in the office. Wound is firm after 13 months.

All patients operated on through 1954 were recently found to be in excellent condition, with no sign of recurrence. The only case lost to further follow up was the first in which the operation was done.

Discussion

Observations have shown that the exogenous nylon material used is far superior to other materials employed in earlier periods. It is reasonable speculation that the muscle and fascia are prone to injury and damage resulting from the strain of intra-abdominal pressure. That damage to these tissues would result from use of inadequate material, while the tender fibrils are developing for the purpose of union, should be evident. The force of intra-abdominal pressure is far greater than the strength of the regenerating tissues.

On the other hand, an exogenous product such as nylon can be attached firmly to healthy fascia, beyond the weakened area of the original hernia. Our experience has shown that intra-abdominal pressure has little disturbed this type of repair. This matter has been reported



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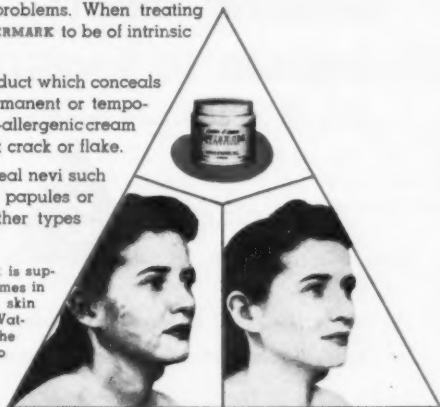
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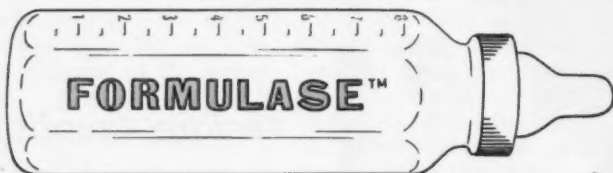
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in a paper on "The Dynamics of Evisceration."⁴

Furthermore, whatever tissue remains from the original repair finds its way into the interstices of the nylon, as demonstrated in the cases reported. It is interesting to note that the thin layer of tissue is so thoroughly incorporated in the nylon, that it is often difficult to recognize the nylon fibers, and that the barrier formed by the nylon is sufficient to prevent a recurrence of the hernia, even in cases in which the muscles have retracted after repair.

Summary and Conclusions

1. Nylon has been found an excellent agent for the repair and prevention of recurrence of hernia. The material is easy to handle, requires no special skill, and can be easily approximated to the fascia.

2. It is unwise to use more suture than absolutely necessary for a firm closure. The silk should be of strength appropriate to withstand intra-abdominal

pressure.

3. The nylon used should be only so large as to cover the area designated. Surplus or folding of the edges increases the probability of drainage and fistula. Any excess nylon should be excised under local anesthesia in the office.

4. A true infection has not been encountered, but a tissue reaction, such as might result from the presence of any foreign body, occurs at times.

5. Through the investigations of Oppenheimer⁵ this synthetic fiber was proved to be free of any carcinogenic properties. In my experience, now dating back to 1951, there has been no evidence of tendency to cause malignant growth.

6. Incisions through the nylon can be made with impunity just as through a fascial layer.

7. Cases reoperated on after eight years showed no sign of deterioration of the nylon, which was fused and incorporated into the fascia.

8. It is nominal in cost. ◀

4. Joseph, M., *Bull. New Jersey Acad. Med.*, 6:297-303, 1960.

5. Oppenheimer, B. S., et al., *Proc. Soc. Exper. Biol. & Med.*, 79:366-369, 1952.



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Current Management of Nodules and Malignant Tumors of the Thyroid Gland

MELVIN A. BLOCK, M.D.,* *Detroit, Michigan*

►As a rule, patients with discrete nodules of the thyroid should undergo surgery, lobectomy being the procedure of choice. Complete removal of the primary lesion is the most important principle in surgery for thyroid carcinoma, with total or near total thyroidectomy advisable in most patients. ◀

Although carcinoma of the thyroid will not be a frequent problem for many physicians, the management of thyroid nodules will be required at least occasionally. Evidence suggests an increase in frequency of thyroid carcinoma, especially in younger persons.¹⁻³ Therefore, alertness in recognizing and treating thyroid nodules and carcinoma is necessary.

Thyroid carcinoma is one malignant tumor curable by surgery in a high percentage of pa-

tients. This is true even though the primary lesion may have metastasized extensively to lymph nodes in the neck. It deserves, therefore, aggressive management.

There is still considerable controversy concerning several aspects of thyroid nodules and carcinoma; namely, which nodules should be treated surgically and if the diagnosis of carcinoma is established, how extensive should be the surgery. General agreement is gradually being reached, and an increasingly radical approach to these questions has developed during the past decade.

Management of Thyroid Nodules

In general, it is believed that all discrete nodules of the thyroid should be removed. The nature of such nodules can be definitely established by a microscopic study after removal, the operative mortality for such sur-

*Department of Surgery, Henry Ford Hospital.

1. Miller, J. M., et al., *J.A.M.A.*, 171:1176-1179, 1959.
2. Winship, T., & Chase, W. W., *Surg., Gynec. & Obst.*, 101:224, 1955.
3. Mustacchi, P., & Cutler, S. J., *New England J. Med.*, 255:889-893, 1956.

gery being a fraction of one per cent. Such nodules are found to be malignant in about four per cent of patients.⁴⁻⁶ The risk of death from thyroid carcinoma is considerably less than this latter figure but is greater than the risk of surgery. The patient's general health should be reasonably good before proceeding with this type of preventive surgery.

It is possible to utilize a certain amount of selection in advising surgery for thyroid nodules. The examining hands can become oversensitive and cause undue concern over lobulations in the thyroid in a patient with a thin neck. It is often possible to make a clinical diagnosis of thyroiditis, a condition which should be suspected in patients complaining of recurrent sore throats associated with painful, tender swelling of the thyroid gland. These patients should be treated medically.

Patients especially liable to harbor cancer in thyroid nodules are those under the age of 20. A high percentage of this group with carcinoma of the thyroid received radiation therapy to the neck region during infancy or early childhood.⁷⁻⁹ Any patient

under age 20 who has a thyroid nodule and has received radiation therapy to the neck area should be considered to have carcinoma of the thyroid until proven otherwise.

Diffusely enlarged irregular or lobular thyroid glands are less likely to contain cancer cells than multinodular glands containing one or more discrete dominant nodules.¹⁰ Surgery is to be advised for patients in the latter group.

It must be realized that thyroid carcinoma can metastasize and the metastasis cause clinical symptoms before the primary lesion can be felt. This is especially true for younger persons. An enlarged cervical lymph node may be the first clinical evidence of thyroid carcinoma in some 15 per cent of cases.¹¹ Thus, a mass or enlarged lymph node in the neck that cannot be definitely explained should be removed.

The scintigram, utilizing a tracer dose of radioactive iodine, has been of limited use in the selection of patients for thyroid surgery.¹² Most thyroid nodules are "cold" or indeterminate in the scintigram whether the nod-

4. Miller, J. M., *New England J. Med.*, 252: 247-251, 1955.

5. Behrns, O. J., et al., *J. Clin. Endocrinol.*, 11:1157-1165, 1951.

6. Beal, J. M., et al., *Arch. Surg.*, 65:879-885, 1952.

7. Clark, D. E., *J.A.M.A.*, 159:1007-1009, 1955.

8. Simpson, C. L., & Hempelmann, L. H., *Cancer*, 10:42-56, 1957.

9. Rooney, D. R., & Powell, R. W., *J.A.M.A.*, 169:69-72, 1959.

10. Mortensen, J. D., et al., *Surgical Forum*, 5:659-663, 1955.

11. Frazer, E. L., & Foote, F. W., Jr., *Cancer*, 11:895-922, 1958.

12. Miller, J. M., & Mellinger, R. C., Experience with the Scintigram in Thyroid Disease, To be published.



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ule is benign or malignant. A few nodules are "hot" (show increased uptake of radioactive iodine) and have been benign in this experience, making surgery for such nodules unnecessary in most cases. Therefore, scintigrams have been made for many patients with thyroid nodules, but "hot" nodules have been infrequently found. Experience with the use of radioactive phosphorus is not sufficient yet to indicate the value of this procedure.¹³

A trial of thyroid therapy has been advocated in the management of thyroid nodules.¹⁴ The nodule will occasionally decrease in size or disappear but at least three months of continuous therapy with large doses is usually necessary. In my experience, this procedure has not been helpful in enough patients to warrant its use in more than a few patients. It appears that it is most helpful in those whose nodules are considered benign for other reasons; i.e., evidence of thyroiditis.

Some physicians hesitate to advise surgery for thyroid nodules because the incidence of cancer is low and, in the absence of other abnormal findings, most such nodules even if malignant are of low grade malignancy. A

few physicians have had enough experience so that their accuracy is high in predicting the nature of a thyroid nodule from the examination. However, for most there are no reliable criteria for determining the nature of most nodules. It must be remembered that the mortality and morbidity of surgery for thyroid nodules is low. Therefore, if there is indecision in an otherwise healthy individual, it is best to determine the nature of the nodule microscopically after its removal.

Surgical Treatment for Nodules

Experience has well established that a total lobectomy should be carried out for a thyroid nodule. Some years ago when thyroid nodules were enucleated only, the local recurrence rate was high if the nodule proved to be malignant, and culminated in the death of the patient.¹⁵ The involved lobe along with adjacent lymph nodes, especially in the tracheo-esophageal groove, should be removed, along with the isthmus and anterior portion of the contralateral lobe. The recurrent laryngeal nerve is carefully preserved.

The operator should inspect for additional nodules in either lobe of the thyroid, since not infrequently other nodules will be found even though not palpable

13. Ackerman, N. B., et al., Presented at 4th Intern. Goiter Conf., London, July, 1960.

14. Greer, M. A., & Astwood, E. B., *J. Clin. Endocrinol. & Metab.*, 13:1312-1329, 1953.

15. Sawyer, J. L., et al., *J. Michigan M. Soc.*, 56:468-470, 1957.

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preoperatively. Occasionally the nodule for which surgery is performed proves to be benign, but another nodule discovered only at surgery is found to be malignant.¹⁶

If nodules are present in both lobes, it is usually best to carry out a total lobectomy for the lobe containing the most suspicious nodule and a partial lobectomy on the other side. However, all nodules should be entirely removed. Parathyroid glands should be identified and preserved on at least one side. A solitary nodule in the isthmus is treated by complete removal of the isthmus and anterior portion of each lobe of the thyroid.

Surgical Treatment for Carcinoma

The objective of surgery for thyroid carcinoma is the complete eradication of the primary growth and all areas of metastatic spread in the neck area, all evident or suspected areas of involvement being widely removed. The microscopic variety of the carcinoma is of little importance in determining the extent of surgery, but is of importance in the prognosis since varieties vary in their tendency to spread by the blood stream as well as the tendency for local invasion. The papillary and follicular varieties of carcinoma are

the most common types now seen. The undifferentiated type, seen most often in older patients and in far advanced stages, occurs less often.

A total lobectomy is the minimal procedure acceptable for the removal of a thyroid carcinoma. Multicentricity of papillary and follicular carcinomas occurs to a significant degree,¹⁷ this being evident in 13 per cent of patients operated for cure of the disease and in 24 per cent of those on whom a total or near total thyroidectomy was done.¹⁸ This has led to performance of a total thyroidectomy in most patients with thyroid carcinoma, the parathyroid glands being preserved on the side least involved. If these glands are not identified and preserved, a remnant of thyroid tissue should be left in the locality where they are normally present. In only a few patients will bilateral extensive carcinoma make sacrifice of parathyroid glands necessary. Hypoparathyroidism is not a negligible disability and should be avoided if possible.

Both papillary and follicular carcinomas spread to lateral cervical lymph nodes. A middle or lower jugular lymph node or one of the nodes in the posterior triangle of the neck involved by

16. Block, M. A., et al., *Arch. Surg.*, 80:715-719, 1960.

17. Black, B. M., et al., *J. Clin. Endocrinol. & Metab.*, 20:130-135, 1960.

18. Block, M. A., et al., *Arch. Surg.*, 81:84-91, 1960.

metastatic carcinoma may be the first indication of the presence of thyroid carcinoma. If cervical lymph nodes are palpable and the presence of thyroid carcinoma has been established, the lymph nodes nearly always contain metastases. If the metastases are extensive or if there is evidence of muscle involvement by the primary or metastatic lesions, a classical radical neck dissection is carried out. Otherwise, the neck dissection is modified by the preservation of the sternocleidomastoid muscle and frequently the submaxillary gland area is not disturbed, thereby producing less deformity of the neck.¹⁹

Whether or not neck dissections should be done for patients with thyroid carcinoma without palpable cervical nodes is controversial. About one-third of such patients have metastases in the nodes irrespective of the histologic variety.²⁰ Whether or not lives are saved by removal of such nodes containing metastases before they are clinically evident is unknown. My preference is for more radical surgery in early stages of cancer. It is helpful to have the diagnosis established by frozen section study at the time of the original thyroid surgery, so that all necessary

surgery can be done in one operative procedure.

Papillary and follicular carcinoma can be cured in the majority of patients if properly treated, five-year survival rates ranging as high as 85 and 90 per cent. However, distant metastases may not appear for 10 or 15 years, so that five-year survival rates do not comprise an adequate evaluation.²¹ It has been shown that younger patients with thyroid carcinoma spread widely to the neck and lungs can still be saved by proper surgery and use of radioactive iodine. Undifferentiated carcinoma of the thyroid usually occurs in older patients and is often inoperable for cure when the patient is first seen. Some of these patients have been aware of nodular thyroid glands for years. Some can be cured by surgery if the patient is seen early and the thyroid condition recognized.

Summary and Conclusions

1. Although carcinoma of the thyroid is not common, it is being recognized more frequently. Physicians can expect to see it more often in the future.

2. In general, patients with discrete nodules of the thyroid should undergo surgery. Total lobectomy is the procedure of choice.

19. Block, M. A., & Miller, J. M., *Am. J. Surg.*, In publication.

20. Block, M. A., et al., *Arch. Surg.*, 78:706-715, 1959.

21. Horn, R. C., & Dull, J. A., *Ann. Surg.*, 139:35-43, 1954.

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References: 1. Smigel, J. O., et al.: J. Am. Geriatrics Soc. 7:61 (Jan.) 1959. 2. Shalowitz, M.: Geriatrics 11:312 (July) 1956.

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3. A thyroid nodule in a patient under age 20 who received radiation therapy to the neck in early childhood, is regarded as carcinoma until proven otherwise.

4. The first indication of the presence of thyroid carcinoma may be an enlarged cervical node (containing metastasis).

5. Complete removal of the primary lesion is the most important principle in surgery for thyroid carcinoma, with total or near total thyroidectomy advisable in a high percentage of cases.

6. All gross evidence of thyroid carcinoma in the neck should be widely removed by surgery, if possible. Parathyroid gland tissue should be preserved.

7. Palpable cervical lymph nodes in a patient with thyroid carcinoma usually indicate metastasis; a radical or modified neck dissection is the treatment for such patients.

8. About one-third of patients with thyroid carcinoma in whom cervical lymph nodes are palpable have metastasis to these nodes. Whether an immediate neck dissection is preferable to a dissection only after nodes are clinically evident is unknown. My preference is early neck dissection for many of these patients.

9. Thyroid carcinoma is a malignant tumor which is curable. It deserves an aggressive yet sensible management. ◀

Cryptococcic Meningitis Treated with Amphotericin B

This form of meningitis has had a mortality of 80 to 90%. A woman of 62 years developed meningeal symptoms 6 days before admission, and on admission showed somnolence and rigid neck. Penicillin, sulfonamides and streptomycin with dihydrostreptomycin had no effect. After 3 weeks *Cryptococcus neoformans* was isolated from the cerebrospinal fluid, and amphotericin

B was given intravenously 17 to 50 mg. daily, to a total of 517 mg. The condition cleared rapidly and the cerebrospinal fluid became sterile. The only side-effect was nausea. The fluid continued sterile 3½ months after treatment, but dyspnea has increased and x-ray examination shows lung infiltration under observation for pulmonary changes.

Brandt, N. J., & Sturup, H., *Ugesk. laeger*, 121:1132-1134, 1959.

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Venous Anatomy of the Lower Extremity

BERT SELIGMAN, M.D., F.A.C.A., Toledo, Ohio

►The veins in the lower extremity are the superficial, the perforating, and the deep. The detailed anatomy of these veins is discussed, with observations on a number of variations which commonly occur. Pathologists and surgeons will find this article to be of particular value in the pursuit of their work.◄

The veins in the lower extremity are the superficial, the perforating, and the deep. Common usage defines the great and small saphenous systems as superficial veins but from a true anatomic-physiologic standpoint they are direct perforating veins. The great saphenous vein begins in the medial marginal vein of the dorsum of the foot draining the subcutaneous tissues, and communicates with branches of the anterior and posterior tibial veins in the leg. It ascends in front of the medial malleolus through the antero-medial portion of the leg where it is in relation with the saphenous nerve, lies posterior to the internal condyle of the

knee, and then runs antero-medial in the thigh to pierce the fossa ovalis in the fascia lata to enter the common femoral vein. In its entire course the vein is superficial to the deep fascia, being practically on it at the ankle and more superficial the higher it goes. Vein distribution can be bizarre and anomalous, but generally the great saphenous vein receives the following branches: in the groin the superficial epigastric, the superficial external pudendal, the superficial circumflex iliac, and the deep external pudendal veins. The postero-medial and antero-lateral veins join the great saphenous usually at some point in the terminal third. At the knee it receives a branch from the anterior tibial area, a branch from the posterior calf which connects with the small saphenous and occasionally replaces it, and the posterior arch vein from the medial surface of the leg which in turn connects with the three medial ankle perforators by a series of small

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venous arches.

The small saphenous vein arises from the lateral aspect of the foot and heel, passes behind the lateral malleolus, where it is in relation with the sural nerve, and then lying on the deep fascia which it perforates usually at the lower margin of the popliteal fossa, though this may take place lower down, ascends superiorly to enter the popliteal vein in the popliteal fossa. It may bypass the popliteal vein completely and in the thigh join the great saphenous or one of the muscular veins. Rarely it ends in the leg to enter the deep circulation with an occasional branch to the great saphenous vein. The lateral ankle perforator joins the small saphenous in the lower third of the leg with one or more subcutaneous branches connecting this area with the medial ankle perforator area.

The anterior and posterior tibial venae comitantes, the peroneal, popliteal and femoral veins represent the deep veins of the lower extremity. The dorsalis pedis veins ascend between the tibia and fibula on the interosseous membrane as the anterior tibial venae comitantes which unite with the posterior tibial and peroneal veins close to the neck of the fibula to form the popliteal vein, which receives muscular branches from the an-

terior tibial group of muscles and several anterior perforating veins, one of which communicates with the great saphenous vein.

Posterior Tibial Venae Comitantes

These are formed by the union of the medial and lateral plantar veins posterior to the medial malleolus and lying on the posterior tibial muscle are covered by the soleus and gastrocnemius muscles. Tributaries include muscular branches as well as perforating veins from the medial ankle area. The most important muscular branches represent those that drain the large valveless venous sinuses, which are present in the soleus muscle, into the posterior tibial venae comitantes. Practically the entire drainage of the lower half of the soleus muscle is into the posterior tibial venae comitantes. A muscular branch from the soleus empties into the lateral ankle perforating vein which in turn empties into the peroneal vein, which at this level is small and deep to the flexor hallucis longus origin from the fibula. As the peroneal vein approaches the knee it leaves the flexor hallucis longus muscle and enters the posterior compartment, where it receives several branches from the lateral aspect of the soleus muscle just before it joins the pos-

terior tibial vein to form the popliteal.

Perforating Veins

Indirect perforating veins pass from a superficial vein to a vein within the substance of the muscle belly. Drainage is to other veins which in turn communicate with the deep veins. Direct perforators originate from superficial veins, which in turn derive from the main veins. The direct perforators empty straight into the deep veins. The three medial ankle perforators are located along the posterior border of the tibia. The inferior or lowest perforator is just behind and below the medial malleolus, the middle medial ankle perforator is about four fingers' breadth above the medial malleolus and the superior or upper medial ankle perforator is located somewhere in the middle third of the leg. All three communicate with the great saphenous vein by means of small venous arches which empty directly into the posterior arch vein thence into the great saphenous. The perforators are short, wide veins which empty directly into the posterior tibial venae comitantes, this entrance being guarded by a valve designed to facilitate the venous flow from superficial to deep. The superior and middle medial ankle perforators effect their union with the posterior tibial

venae comitantes at the point where veins from the soleus muscle empty into these main deep vessels. Thus thrombosis in the muscular veins can spread to either the posterior tibial or the perforators or both, and with the resultant damage or destruction of the venous valves the stage is set for venous hypertension with its inexorable sequelae.

The lateral ankle perforator receives a muscular branch from the soleus, winds around the fibula at the junction of the lower and middle thirds of the leg, and then empties into the peroneal vein. This vein communicates with the small saphenous vein on the lateral aspect of the leg as well as with the medial ankle perforators.

On the medial aspect of the lower third of the thigh there is a constant perforating vein which connects the great saphenous system with the femoral vein. In the upper third of the medial aspect of the leg is a direct perforator going from the great saphenous to the posterior tibial veins. On the anterior aspect of the leg a perforating vein arises from a branch of the great saphenous vein and ends in the anterior tibial veins.

Deep Veins

The popliteal vein receives one vein from each belly of the gas-

trocnemius muscle, this venous drainage being effected in the lower part of the popliteal fossa, where the vein is superficial to the artery and medial to it in contrast to its lateral position as it passes through the tendinous arch in the adductor magnus muscle to become the superficial femoral vein. In the adductor canal the vein is at first lateral to the artery, and as it ascends towards the apex of the femoral triangle it assumes a posterior position, remaining behind the artery in the lower part of the femoral triangle and medial in the upper part. The profunda femoris vein usually joins the superficial femoral vein just below the inguinal ligament, though this junction may be effected lower down in the thigh. Muscular tributaries represent additional drainage from this area into the superficial femoral vein.

The profunda femoris vein begins in the lower third of the thigh as a small vein which corresponds to the fourth perforating artery and drains the hamstring muscles. It joins with branches from above which too receive drainage from the pos-

terior femoral muscles (biceps femoris, semitendinosus and semimembranosus), and also from the area above the adductor brevis muscle. The lateral and medial femoral circumflex veins plus numerous muscular branches represent the other veins which empty into the profunda femoris vein.

Dissections of the deep thigh veins confirm observations¹ that the drainage of the profunda femoris vein into the superficial femoral vein with few venous collaterals is the exception rather than the rule. More frequently (in 70 per cent of cases) there is a vast network of collaterals between the superficial femoral and profunda femoris veins as well as reduplication of the main venous channels. The last variation, which approaches the first in occurrence, is represented by a direct communication at the lower end of the adductor canal of the profunda femoris into the superficial femoral vein and again at its usual entrance into the latter just below the inguinal ligament with numerous small cross collaterals. ◀

1. Dodd, H., & Cockett, F. B., *The Pathology and Surgery of the Veins of the Lower Limb*, London and Edinburgh, 1956. P. 45.

A Guide to the Management of Placenta Praevia

ROBERT C. HAYS, M.D.* and
ROBERT E. L. NESBITT, JR.,* M.D., Albany, New York

► *Pregnancy should be terminated at a time optimal for maximal perinatal salvage and protection of the mother against hazards of hemorrhage, trauma and unnecessary operations. Method of treatment is based on status of cervix, parity, degree of praevia, presence or absence of labor, and amount of bleeding.*◄

The woman who bleeds in the third trimester of pregnancy presents a serious problem. Undue conservatism may subject mother and fetus to great risks; too energetic vaginal or rectal examination may clarify the diagnosis, but provoke hemorrhage and delivery of an immature infant.

Objectives

The purpose of this report is to provide a methodical approach to the management of patients with third trimester bleeding. All cases of placenta praevia should be managed with these

basic objectives in mind: control of bleeding, adequate replacement of blood loss, termination of the pregnancy at optimal time, and selection of the mode of delivery with minimal risk of cervical and lower uterine segment lacerations.

Principles of Clinical Management

A chart is provided which shows the steps to be taken in diagnosing and treating such cases (Fig. 1).

All such patients should be suspected of having either placental abruption or placenta praevia, until proved otherwise. Distinction between these two is usually made on the basis of pain and status of uterine tone. However, as noted in the flow chart, there is overlapping of the presenting signs and symptoms. The presence of pain, especially in patients with normal uterine tone, does not exclude the possibility of the existence

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of placenta praevia. The latter condition should not be dismissed as the primary cause of bleeding until adequate study has demonstrated that the placenta is normally implanted.

A distinction made only on the basis of clinical symptoms is likely to be erroneous, particularly in differentiating placenta praevia and certain cases of partial or marginal separations of the placenta. It is important to recognize, moreover, that painless vaginal bleeding, even profuse, may arise from pathology of the lower genital tract. Thus, it is unacceptable clinical practice to proceed to delivery, especially if it entails the induction of labor or abdominal intervention, without first making a thorough pelvic examination.

Intracervical digital examination gives the most reliable information. Profuse hemorrhage at any stage of pregnancy, the onset of labor or bleeding in any significant amount in patients who are at or near term, demands careful examination—but only after providing blood in ample quantities for immediate use, and assuring the performance of this procedure in an operating room, under "double setup" precautions, for immediate vaginal or abdominal delivery.

One-half or more of the cases of placenta praevia present with an initial episode of bleeding pri-

or to the 37th gestational week, and are dependent, in large measure, upon continued intra-uterine gestation for reasonable perinatal salvage. Thus, if labor has not ensued and the blood loss is minimal, it is usually preferable in cases in which the fetal heart sounds are audible to postpone the intracervical examination and to continue expectant care until the fetus has reached sufficient maturity to assure optimal chance for extra-uterine survival. It should be borne in mind, however, that one is justified in delaying the termination of pregnancy in the interests of the fetus only under favorable circumstances.

During this interval, the patient may be ambulatory if bleeding ceases, but vaginal and rectal examinations, douches, enemas, coitus, vigorous activity and harsh laxatives are prohibited. The requisites of this expectant program of management include meticulous followup care, full cooperation of the patient, complete bed rest or supervised ambulation, proper evaluation of blood loss, serial hematologic determinations and ample facilities for blood replacement and immediate definitive treatment. These safeguards can be best provided in the hospital.

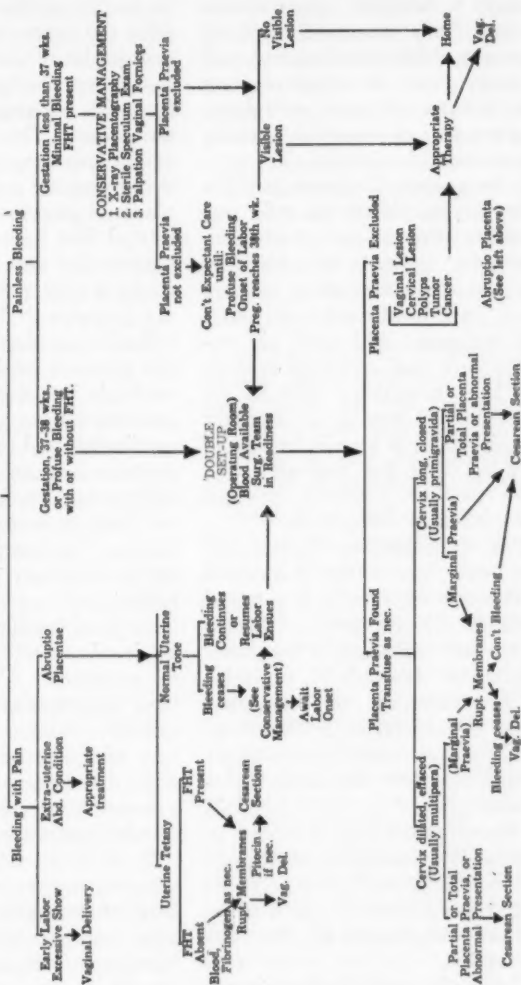
Certain diagnostic adjuncts are available for use in patients who do not present with urgent

Figure 1

THIRD TRIMESTER BLEEDING (Quantity Greater than Simple Spotting)

IMMEDIATE HOSPITALIZATION

Bed rest; Close observation; evaluation of blood loss
Careful abdominal (uterine), vaginal or rectal examination;
Blood count; IV fluids (#18 needle), if bleeding is active.



clinical signs or symptoms which prompt a detailed digital examination. Two principal methods of study which may be employed without fear of compromising the pregnancy are radiologic diagnosis and careful sterile speculum examination.

1. Radiologic diagnosis is valuable for its ability to rule out placenta praevia in a high percentage of patients who bleed in the last trimester, thus sparing them over-treatment and needless expense. Although all patients with vaginal bleeding during late pregnancy should be suspected of having a placental complication, it should be borne in mind that the majority will have neither placenta praevia nor placental abruption.

The radiographic techniques that are generally employed clinically are direct, indirect, and contrast placentography. Excessive x-ray exposure of the fetus should be avoided if possible; initial screening of suspected cases is satisfactorily achieved with a single standing soft-tissue lateral film. By this direct placentography, it is often possible to demonstrate the placenta in profile. The possibility of placenta praevia is excluded in cases where the placenta is seen to be normally implanted on the fundal wall.

If the placental shadow is not clearly visible in the fundus, an

indirect method of study should be employed. This technique implies the absence of a mass large enough to be placenta if the vertex is not displaced significantly from the midsagittal or midcoronal planes. The cystogram (air or contrast medium) is helpful in diagnosing anterior and total placenta praevias. In addition, a lateral film taken after instilling air into the rectum may be used when a posterior placenta praevia is suspected.

Radiographic demonstration of the placenta by direct or indirect methods is not possible in many patients whose pregnancies have not progressed to the 32nd week, and in cases complicated by multiple gestation, hydramnios, pelvic tumors, and fetal malpresentation. In general, however, when appropriate radiologic techniques are employed on an individual basis, the placenta can be localized with a high degree of accuracy. Although specialized techniques, such as amniography, angiography, or injection of radio isotopes are available, these are practicable at the present time only for experimental and research purposes.

2. It is usually desirable to conduct a careful sterile speculum examination of the vagina and cervix for a cause of bleeding. A Papanicolaou smear should be obtained if one has not been taken early in pregnancy.

A digital examination of the cervical os is not performed and, if no significant pathology is seen in the lower genital tract, no further investigation is required. When the inspection discloses vaginitis, cervicitis, polyps or (rarely) cancer as the primary cause of bleeding, the appropriate definitive treatment is instituted.

Palpation of the presenting part through the vaginal fornices is also helpful in learning what should be known in these cases, but this examination must be performed carefully so as not to disturb the placental attachment. A boggy mass palpable between the lower uterine segment and the presenting part gives further authenticity to the suspicion of placenta praevia and strengthens the decision to keep the patient in the hospital even though bleeding may have stopped.

Active Treatment

It can be seen from the flow chart that the selection of a method of definitive treatment in cases of placenta praevia is based primarily upon status of the cervix, parity, degree of the praevia, presence or absence of labor, and the amount and duration of bleeding. All cases of total placenta praevia should be delivered by Cesarean section and

most primigravidas who have even minor degrees of partial praevia are better delivered by the abdominal route. Although there is somewhat more latitude in selecting a method of definitive management for multiparas who have partial placenta praevia, patients in this category who are actively bleeding but who are not in labor and in whom the cervix is long and relatively closed, should be delivered by Cesarean section.

Multiparas with marginal praevia, especially those with an open cervix or who are already in labor, are best handled by rupture of the membranes in anticipation of vaginal delivery.

Only rarely, when labor does not proceed normally or heavy vaginal bleeding continues, will it become necessary to resort to abdominal delivery. In the presence of active infection in addition to placenta praevia, the outlook is grave, and every effort should be exerted to deliver by vaginal methods. It should be borne in mind constantly that, unless blood is immediately available and the losses can be replaced promptly and adequately, the end results may be disastrous, regardless of the mode of delivery. Moreover, it should be emphasized that, if a vaginal procedure is selected, it must be simple and atraumatic.

Summary

The objectives of current management of placenta praevia are the termination of pregnancy at a time optimal for maximal perinatal salvage and the protection of the mother against the hazards of hemorrhage, trauma, and un-

necessary operations. To meet these objectives, the risks and probable gains of each course of management must be carefully assessed. A methodical approach to diagnosis and treatment which assures optimal maternal and perinatal salvage has been offered in essential detail. ◀

Familial Recurring Polyserositis Simulating Acute Surgical Condition of the Abdomen

Various designations have been given to a disease of unknown etiology characterized by recurring acute inflammation of single or multiple serous membranes, usually accompanied by fever and limited almost exclusively to people of Armenian, Jewish, or Arab origin. The condition has been termed benign paroxysmal peritonitis, periodic peritonitis, La Maladie Periodique, and familial Mediterranean fever.

Brief episodes of abdominal pain lasting one or 2 days, often preceded by malaise and usually accompanied by fever and anorexia, in a Jew, Arab, or Armenian, should arouse suspicion of the disease. Onset of attacks before the third decade and a history of familial incidence of similar attacks are common. The

patients are completely well in the intervals between illnesses. Abdominal pain may be felt in any or all quadrants and may radiate to the flanks and lumbar areas. Flexion of the legs on the abdomen is a common posture during attacks of pain. The quite common pleuritic involvement and a history of joint symptoms is helpful diagnostically.

Two cases of familial recurring polyserositis manifesting typical abdominal episodes were seen, one in an Arab and one in a Jewess. The close similarity of the findings to those of acute surgical conditions of the abdomen make greater awareness of this entity among surgeons and physicians necessary if unwarranted surgery is to be avoided.

Nixon, R. K., & Priest, R. J., *New England J. Med.*, 263:18-21, 1960.

Practical Management of Pruritus Ani

EMIL GRANET, M.D.,* *New York, New York*

►Since there appears to be a direct relationship between fecal soiling of the perianal skin and pruritus ani, routine treatment consists of anal hygiene and use of various medications. Utilized continuously by co-operative patients, this simple regimen resulted in a high rate of symptomatic remission.◀

Prolonged and intense itching confined to the anal region denotes a syndrome with characteristic symptoms, although these may result from manifold and heterogeneous causes. This diversity of causes has resulted in widely differing opinions as to the proper treatment of pruritus ani.

The multiple origins of anal pruritus can be classified in this manner:

1. Anorectal Lesions—Fistulas, fissures, prolapsing hemorrhoids, anal papillitis and cryptitis, hypersecretion of rectal mucus.

2. Dermatologic Lesions of the Perianal Skin—Atopic eczema,

neurodermatitis, mycotic infections, psoriasis, lichen planus.

3. Systemic and General Conditions—*Enterobius vermicularis* (pinworm) infestations, perianal dermatitis resulting from oral antibiotic therapy, atopic dermatitis due to local allergens such as nylon or wool underclothing, "caine" medicaments, and specific food allergies.

4. Neurogenic Pruritus Ani—Anal erotic fixation in psychoneurotic patients.

In patients with diabetes, hepatic jaundice, and lymphomas, pruritus is generalized and involves the anal region.

In the many patients who have idiopathic pruritus ani, despite diligent and exhaustive investigation no primary etiologic agent can be discovered.

Most patients with pruritus have had this condition for a protracted time and have run the therapeutic gamut of salves and suppositories, including those containing corticosteroids; some have been treated inten-

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sively with x-ray; many have had anorectal surgical procedures. It is remarkable that after an interval of freedom from itching following some presumably specific form of therapy such as corticosteroids, x-ray, nerve block, and even subcutaneous neurotomy, symptoms inevitably recur. It is clear that no definitive form of treatment results universally in permanent cure.

A Common Factor

An obvious factor constantly present in all patients is that of contamination of the anal canal and perianal skin by feces following defecation. This is one factor which is always present despite medical, physical, or surgical treatment of pruritus ani. Biopsies of the skin at the anal verge in patients with chronic pruritus ani have revealed the presence of hydrops of the Malpighian cells in the epidermis, exaggeration of rete pegs, thickening of the corium, and dilation of vascular and lymph channels.¹ These changes are essentially those seen in a chemical (venenata) dermatitis. It was concluded that idiopathic pruritus ani is a chemical dermatitis due to contact with a skin irritant present in the patient's feces such as skatole, indole, or other decomposition products of pro-

tein digestion.

The goblet cells of the Lieberkühn glands of the rectal mucosa discharge a considerable quantity of highly alkaline mucus (pH of 8 to 10) into the lumen. Small quantities of mucus often are expelled onto the perianal skin with coughing or during the passage of flatus. The irritating action of this highly alkaline mucus on the perianal skin has been noted as an important factor in the etiology of pruritus ani.²

Mycotic lesions, common in pruritus ani, are characterized by a perianal skin which appears reddened, sodden, and thickened. The lesion frequently extends into the gluteal folds and anteriorly onto the perineum. Epidermophytons have been demonstrated in approximately 20 per cent of patients with chronic pruritus ani.^{3,4}

Psoriasis, lichen planus, and circumscribed neurodermatitis occur in the perianal region and produce itching. These entities are managed best by a dermatologist.

Enterobius vermicularis is a common cause of intense anal itching in children and is not rare in adults. The ova of the pinworm should be sought for routinely by the simple Scotch

1. Tucker, C. C., & Hellwig, C. A., *A.M.A. Arch. Surg.*, 34:929, 1937.

2. Bacon, H. E., & Hardwick, C. E., *J. M. Soc. New Jersey*, 44:446, 1947.

3. Castellani, A., *Practitioner*, 117:341, 1926.

4. Terrell, E. H., & Shaw, F. W., *South. M.J.*, 21:887, 1928.

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tape test in all patients with pruritus ani.

A carefully taken history usually will expose specific food allergies, sensitivity to condiments, and anal pruritus which follows excessive imbibition of intoxicants. These specific irritants must be prohibited rigidly in order to obtain symptomatic remission.

Finally, when present in patients with chronic pruritus ani, prolapsing hemorrhoids, hypertrophied anal papillae, chronic anal fissures, and anal fistulas must be removed surgically. Sigmoidoscopic examination is mandatory in all patients with pruritus ani, before beginning treatment, in order to rule out concurrent neoplastic or ulcerative disease of the rectum and sigmoid.

Many physicians do not strive to determine etiologic factors in their patients with pruritus ani. After obtaining a cursory history and performing a casual examination, they empirically direct therapy merely toward alleviating the itch.

No Universal Treatment

It has been established that there is no common etiology for chronic pruritus ani; therefore, no universally adequate treatment has been developed. Despite an early successful thera-

peutic response, recurrences are frequent and expected. Furthermore, severe complications may occur following certain therapeutic measures. Extensive abscesses have resulted from alcohol and other medicaments injected subcutaneously in the perianal area. Azoospermia has been observed following roentgen ray treatment, presumably with genital shielding, for anal pruritus administered by competent dermatologists. The use of x-ray therapy should be prohibited in fertile patients with pruritus ani.

No matter what therapeutic agent is utilized for anal pruritus, one constant factor which remains is that of defecatory soiling of the perianal skin with feces. It is probable that in certain atopic individuals sensitivity to chemical substances in their own feces, by constant contact, results in perianal dermatitis with itching as the chief symptom.

The perianal area is well adapted for the development of contact dermatitis, since heat, perspiration, hair, and skin folds are all present. Added to these is the constant mechanical friction produced by walking or sitting. Furthermore, the act of using toilet tissue after defecation is tantamount to anointing feces into the perianal skin. In pruri-

tus ani, with its abraded and eroded perianal epidermis, cellulitis frequently is introduced into the subepithelium by this means.

The concept that patients with obstinate pruritus ani are specifically sensitive to chemical substances in their own feces forms the basis of treatment in most cases. This important causative factor is present in all cases except those due to a specific food allergy, dermatologic entities, pinworm infestations, and the surgical lesions previously enumerated. Excepted also is the occasional patient with a psychoneurotic anal fixation in whom the anal pruritus stubbornly resists therapy.⁵

A detailed medical history is important with emphasis on the results of previous treatment, recurrences, the time relationship of itching to defecation and also its nocturnal pattern. Constitutional disease must be ruled out by physical and laboratory examinations.

On anoscopic examination it is found that many patients with anal pruritus have residual feces in the lower rectum despite the fact that defecation occurred shortly before the examination. This is significant because patients have learned by experience that an episode of severe

itching can be temporarily alleviated by a cleansing rectal lavage.

Therapy

It would be futile to attempt a critical evaluation of all the methods of therapy which have been advocated. The history obtained from any patient with pruritus ani of long standing serves as a condemnation for most of our therapeutic armamentarium in this disease. The principles of therapy which have afforded satisfactory relief for many patients will be described, also the rationale for their utilization. Emphasis in therapy is placed on simple measures which patients can understand and apply persistently, so that relief from their intolerable itching can be maintained even though permanent cure may not be possible.

ANAL HYGIENE

Treatment is directed mainly toward keeping the perianal skin free of feces. Significant pathologic lesions of the anorectum must have appropriate surgical treatment. Lesions of the perianal skin secondary to scratching, such as abrasions, fissuration and cellulitis, are treated by measures directed toward restitution of normal, healthy skin. The patient must be made to understand that a direct rela-

5. Granet, E., *Manual of Proctology*, Year Book Publishers, Chicago, 1954, p. 215.

tionship exists between his itching and fecal perianal soiling. It must be emphasized that success of treatment depends largely upon his careful cooperation in following instructions' implicitly. Instructions in the care of the anorectum and perianal region are carefully explained and the following typed directions are given to him:

After defecation whenever possible take a small rectal enema using warm tap water. Expel this immediately. A convenient method is by the use of a 3 ounce rubber hand enema syringe (Ear and Ulcer syringe, Davol). Cleanse the perianal skin with wet absorbent cotton. Do not use toilet tissue. Dry well with cotton and powder with talcum. Cleansing with wet cotton and dusting with powder may be repeated several times daily, depending on the amount of moisture and the degree of itching. Keep the skin about the anus always clean and dry. Before retiring, repeat the small enema, cleanse, dry and powder the anal region. Then rub a small amount of ointment into the perianal skin. This may cause burning for several minutes.

Rectal lavage is directed toward removing residual feces from the lower rectum and anus following defecation. It is advised before retiring, because in most patients the itch is intensified at night. During the day feces may accumulate in the lower rectum and its removal before retiring frequently prevents nocturnal itching.

The ointment prescribed is

mild Whitfield's ointment modified as follows:

Menthol	0.2
Phenol	0.3
Salicylic Acid	0.5
Benzoic Acid	1.0
Acid Mantle Creme (Dome)	60.0

This preparation is used routinely for three reasons. First, mycotic infections are associated with pruritus ani in about 20 per cent of all patients.³ Therefore, empirically it is advisable to employ routinely an antimycotic medicament. Secondly, this ointment burns somewhat when applied to excoriated perianal skin. This discomfort is accepted gladly by the patient in preference to the intolerable itch which plagues him after retiring. Thirdly, Acid Mantle Creme contains aluminum acetate in a vanishing cream base having a pH of 4.2. This acid ointment tends to neutralize the excoriating alkaline mucus that leaks from the sphincteric rectum.

Patients with markedly inflamed, abraded skin and local cellulitis are treated first with soothing wet dressings (Dom-boro, Bur-Veen) applied overnight on absorbent cotton pads held in place under a sanitary napkin. In those with severe cellulitis, bed rest for several days with constant wet dressings may be necessary. Even at this time, rectal lavage and perianal cleansing are used as described, but

the Whitfield type ointment is withheld.

In this acute inflammatory stage a hydrocortisone ointment should be applied several times daily. The antipruritic action of the corticosteroids when used topically is as yet unexplained, but their temporary efficacy is well established clinically. As the skin improves, the hydrocortisone ointment is discontinued and the modified Whitfield's ointment is utilized.

ADJUNCTS TO TREATMENT

In addition to the basic local treatment with anal hygiene, systemic measures are utilized. Most patients with chronic anal pruritus are high-strung, sensitive, vagotonic individuals and require individual management directed to their personality as a whole. They may require mild sedation, hormone therapy, and continued sympathetic reassurance.

The diet is generally not disturbed except to ban specific foods when the patient is suspected of having allergies. Strong condiments are interdicted; spirits allowed only occasionally, in small quantities and well diluted. Cocoa or tea is substituted for coffee in patients who have frequent stools. The administration of malt extracts,⁶ yogurt and

buttermilk is helpful in fostering the growth of *L. acidophilus*, thereby diminishing putrefactive organisms in the feces.

In patients with severe nocturnal pruritus, diphenhydramine HCl (Benadryl), 50 to 100 mg., is administered one hour before retiring. In addition to its antihistaminic action, a frequent side reaction of Benadryl is production and maintenance of sound sleep.

Anorectal lesions, such as prolapsing hemorrhoids, rugated thickened skin tags, fissures, fistulas or severe cryptitis, must be excised. Furthermore, it is advisable to extend the scope of operation by performing a subcutaneous neurotomy.⁵ This procedure assures relief from pruritus for some six weeks during the postoperative period. With convalescence the anal hygiene regimen is instituted and maintained indefinitely, even after complete healing of the wound.

Intelligent and cooperative patients have attained about 90 per cent relief of pruritus in about one month on this type of treatment. With increasing clinical improvement, patients tend to desist from rigid treatment. Prompt recurrence of pruritus supervenes after cessation of, or as a result of careless, anal hygiene.⁷ This clinical truism tends

6. Brooks, L. H., *Dis. Colon & Rect.*, 1:372, 1958.

7. Granet, E., *New England J. Med.*, 223: 1015, 1940.

"It's about time someone developed a good analgesic that controls pain and also allows the patient to stay awake and cooperate better with the nursing staff."

"It's about time we had an analgesic that doesn't keep postoperative patients knocked out. I'd like to see them awake after operation. I'd worry less about hypostatic pneumonia and venous stasis."



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"The time is here—
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Alvodine tablets, 50 mg., scored. Average oral dose for adults: from 25 to 50 mg. every four to six hours as required. **Alvodine ampuls**, 1 cc. containing 20 mg. per cc. Average subcutaneous or intramuscular dose for adults: from 10 to 20 mg. every four hours as required. **Narcotic Blank Required.**

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New York 18, N. Y.

*Alvodine, trademark.

to confirm the direct causal relationship between fecal perianal soiling and pruritus ani.

Summary

Pruritus ani is a symptom resulting from many causes, some of them obscure. Definite causes include dermatologic entities, mycotic infections, pinworm infestation and specific food allergy. Pathologic lesions of the anorectum, prolapsing hemorrhoids, fissures, and fistulas are responsible wholly or in part for many cases of pruritus ani. In most cases the causative factors cannot be determined with accuracy.

There appears to be a direct relationship between fecal soiling of the perianal skin and pruritus ani. Irritating substances in the feces induce a contact (ve-

nenata) dermatitis in atopic patients. Evidence favoring this concept exists in pathologic studies of involved skin which show changes similar to those found in other types of chemical dermatoses. It is likely that constant soiling of the perianal skin with feces is responsible for recurrences which occur after presumably successful treatment with medical and physical measures, and even after surgical subcutaneous neurotomy.

Based on this concept of contact dermatitis induced by perianal soiling with feces, a routine of treatment with anal hygiene and medication was instituted. This simple regimen has resulted in a high rate of symptomatic and objective remission in refractory pruritus ani when utilized continuously by cooperative patients. ◀

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Phenformin: Fifty-Four Month Experience

JULIUS POMERANZE, M.D., *New York, New York*

► *Phenformin is most useful in maturity-onset, stable, adult diabetics. In the insulin-dependent, ketosis-prone, juvenile or adult diabetic, the greatest contribution of this drug has been in better control of diabetes when used as an adjunct to insulin. Side effects were few and were easily controlled.* ◀

This report deals with the followup data of 128 diabetic patients whose treatment with phenformin* was initiated during the first 24 months of a 4½-year study period.¹ Although a much larger group of diabetic patients has been treated with phenformin with good to excellent results, this report is concerned only with a long-term followup of the patients described in an earlier two-year report.² Most noteworthy in this follow-

up is the demonstration of the absence of toxic effects and the maintenance of relatively uninterrupted diabetic control. These facts constitute the most important demonstration of the usefulness of phenformin.

The most important clinical feature of this oral agent is that it is singularly effective in the control of adult, stable diabetes. Its use in the unstable adult and juvenile diabetic should be adjunctive to insulin and then only in those cases in which stabilization of extremely labile diabetes can be achieved with it.

The reported gastrointestinal reactivity arising from the early misuse of the drug influenced the thinking and writing of most investigators. Reactivity is no longer a problem in practice;³ proper dosage regulation, and the early recognition of potentially reactive patients, lessen the frequency and severity of side ef-

*DRI®. U. S. Vitamin & Pharmaceutical Corp., New York, New York.

1. Pomeranze, J., et al., *Proc. Soc. Exp. Biol. & Med.*, 95:193, 1957; and Pomeranze J., *J. Clin. Endocrinol.*, 17:1011, 1957.

2. Pomeranze, J., *New York J. Med.*, 58:3824, 1958; and Pomeranze, J., et al., *J.A.M.A.*, 171:252, 1959.

3. Barclay, P. L., *J.A.M.A.*, 174:474, 1960.

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fects. Unfortunately, early reports of side effects persist in review articles.

This report is an analysis of the results obtained with phenformin in the extended treatment of diabetes mellitus. This, the longest demonstration of phenformin use, clearly indicates that a pharmacologically dynamic drug with the narrow therapeutic index⁴ of phenformin can be successfully used in private practice.

Methods

In the first two years of this study, from June 1956 to June 1958, 128 patients were successfully treated with phenformin. The study included middle-aged diabetics, obese and non-obese, some prone and some resistant to ketoacidosis. It also included a larger number of older, a small group of young, labile diabetic patients, prone to ketoacidosis, and three of those unusual young diabetic patients, resistant to ketoacidosis and responsive to diet and oral hypoglycemic drugs, without the use of insulin.

It has been previously demonstrated that the patient's age, age at diagnosis, known duration of diabetes, dose and duration of administration of insulin do not necessarily predetermine the success of insulin replacement

with phenformin.² More than 25 per cent of patients in this series had insulin requirements in excess of 40 units per day.

The establishment of the need for hypoglycemic therapy, standards for successful therapy with phenformin, diet and method of administration of phenformin have been outlined.¹ Blood counts and renal and liver function tests were made at regular intervals during the 54-month period.

In clinical practice the true criterion of response to therapy is whether the patient fares as well or better on the drug than on the most successful therapy previously maintained.

Results

Of the 128 diabetic patients treated during the first 24 months of this study period, those successfully treated with phenformin alone included 68 over age 45, 39 aged 31 to 44 years (onset after age 30), and three with young, mild ketosis-resistant diabetes. In addition, 18 were successfully treated with phenformin plus insulin; two of these were over age 45, six were aged 31 to 44, and 10 were labile, growth onset.

After 28 to 54 months of treatment, 88 patients were still satisfactorily controlled by phenformin treatment alone; of these, 54

4. Pomeranz, J., & Gadek, R. J., *New England J. Med.*, 257:73, 1957.

were over age 45, 32 were aged 31 to 44 years, and two were young mild diabetics. After a similar period, 15 were still being maintained satisfactorily on phenformin plus insulin; one patient was over 45 years, six were aged 31 to 44 years, and eight were young labile diabetics.

At the end of the study period, four patients were no longer being treated with phenformin because of lack of response to the drug; of these, one was over age 45, two were aged 31 to 44 years, and one was a young labile diabetic. An additional 21 patients were lost from study or had died of unrelated causes; of these, 14 were over age 45, five were aged 31 to 44 years, one was a young labile diabetic, and one was a young mild diabetic.

Thus, of 70 adult, stable diabetic patients of the over-45 year group, satisfactory control was achieved in 69 and in only one was the result failure. This patient became unresponsive to phenformin and required insulin. Fourteen patients in this age bracket died of causes unrelated to their diabetic therapy or were lost from followup.

In the 31 to 44-year age group, 32 of 39 continue to respond to phenformin alone, and all six who required large doses of insulin continue with a marked insulin reduction. Five patients

were lost from the study or died of an unrelated cause. Two became unresponsive to phenformin alone and required insulin supplementation. It is felt that the disease in these patients is advanced beyond the capability of oral hypoglycemic agents and that these patients are truly insulin-dependent.

Of the young, labile diabetic patients, eight have maintained their previous status. One was lost from the followup and one appears to do as well without DBI, since a severe emotional problem was removed. Of the three young, ketosis-resistant diabetic patients, followup contact was lost in one; the two who remain under treatment with phenformin alone are well controlled.

This last group included three young people whose onset of diabetes occurred before 20 years, who had never suffered diabetic acidosis and who were well controlled with less than 10 units of insulin per day. In these four patients the withdrawal of insulin and/or poor dietary control led to hyperglycemia and glycosuria without ketonemia or ketonuria.

Dosage

In the 28 to 54-month period of this study, the dosage of phenformin required to maintain satisfactory clinical control of dia-

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betes was unchanged in 82 patients; of these, 49 were over age 45, 28 were aged 31 to 44 years, four were young labile diabetics, and one was a young mild diabetic. Dosage was increased in three patients over age 45, five aged 31 to 44, and in two young labile diabetics. Dosage was decreased in three patients over age 45, five patients aged 31 to 44, two young labile diabetics, and one young mild diabetic.

Seven patients, considered to be failures in the early experiences with the drug, have since been successfully treated with phenformin. These "failures" were due to initial overdosage. It is now recognized that a lower dosage of phenformin will frequently produce optimum control of the diabetes without causing gastrointestinal side effects. Generally the initial dosage should be as low as 25 mg. Increments are not made before 4 to 7 days and the total daily dosage usually should not exceed 150 mg. Patients who fail to respond to a sulfonylurea oral hypoglycemic drug are frequently benefited by substitution with phenformin or by a combination of the two. Similarly, those patients who tolerate an insufficient dose of DBI can often be treated with combination therapy.⁵ Find-

ings in this study indicate that the individual daily requirement for DBI is relatively stable and flexible. There is in this series a virtual absence of acquired resistance or true secondary failure.

In some patients, during this long period of treatment, the severity of the diabetes increased as a result of infection or trauma and in some of these cases it was advisable to add or substitute insulin until the complicating factor was resolved.

Discussion

Most overweight, maturity-onset, ketosis-resistant diabetic patients can, following early recognition of the disease, be treated with diet alone. The principle of weight reduction is cardinal in the obese diabetic as it is in obesity with or without a clinical disease. Those patients who accomplish weight loss early and maintain this loss profit greatly. Frequently, the glucose tolerance returns to normal and the disease is clinically and chemically unrecognizable. The natural progression of the disease is probably delayed. Unfortunately, this is only infrequently and temporarily accomplished. Sound dietary habits are not easily formed and are often quickly abandoned.

Data has been presented supporting the view that sugar tol-

5. Beaser, S. B., *New England J. Med.*, 259: 1207-1210, 1958.

erance is lost under prolonged hyperglycemic stress.⁶ Continual glycosuria and hyperglycemia, in the diabetic patient not dependent on insulin, appear to hasten the chemical deterioration of the disease. Poor diabetic control quickly causes a state at which ideal dietary habits are no longer effective.

The use of oral sulfonylurea in the prediabetic state was suggested by Jackson.⁷ It was found that tolbutamide improved the carbohydrate tolerance in young non-obese, symptomless diabetics.⁸ A similar routine has been pursued with phenformin alone or phenformin with sulfonylurea. In all patients with mild, symptomless diabetes, glucose tolerance improves beyond the improvement achieved by diet alone.

It is therefore reasonable to assume that oral hyperglycemic drug therapy should be begun immediately it is recognized that the glucose tolerance is not within normal limits. In some few patients, good results can be accomplished with diet alone. In all those who cannot accomplish proper dietary management or who are not completely responsive to dietary restriction, the use of phenformin deserves

serious consideration.

The oral hypoglycemic drugs can be used for hyperglycemic aglycosuric patients for whom it is difficult to prescribe insulin and in whom insulin-resistance may make it less effective. On the other hand, the problem of hypoglycemic reaction is obviated. These agents often conveniently and completely replace insulin in ketosis-resistant diabetes, sometimes providing better control than with insulin alone. Because of their ease of administration, these drugs are used with greater frequency in the early period of diabetes, when a normal diurnal glucose tolerance and aglycosuria may delay the progress of the disease process. A beneficial effect on degenerative changes is hopefully anticipated.

Side Effects

Long-term studies of the use of phenformin indicate clearly that its continuous use does not cause toxicity. The adult, ketosis-resistant diabetic patients reveal no clinical or biochemical evidence of untoward effects. This is conformed by observations extending over 54 months. Side effects have been kept to a minimum by careful dose regulation and there is no reason to fear gastrointestinal reactivity if simple rules are observed. Con-

6. Schtzer, H. S., & Smith, W. L., *Proc. Central Soc., Clin. Res.*, Chicago, Illinois 1960.

7. Jackson, W. P. U., *S. African Med. J.*, 33: 51, 1959.

8. Fajans, S. S., & Conn, J. W., *Diabetes*, 9:83, 1960.

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trol should be maintained with the lowest dose. In patients with prodromal signs of gastrointestinal intolerance to the drug, the dose is lowered for a few weeks to determine whether this will control the diabetes while eliminating the side effect. Often re-institution of the higher dose after a few weeks is possible without reactivity.

If the disease cannot be perfectly controlled without nausea, a sulfonylurea drug is added to the sub-reactive dose of DBI, usually with excellent results. In a few cases—almost all in ketosis-prone diabetics—a mild ketonuria or slight weight loss results, which is simply and quickly controlled by an increase in carbohydrates in the diet and/or modification of dosage.

Conclusions

Phenformin is most useful in maturity-onset, stable, adult diabetics. The high percentage of cases in which it is clinically satisfactory, the ease and simplicity of its administration in ketosis-

resistant cases of diabetes, and the maintenance of long-term response without secondary failure have been impressive.

In the insulin-dependent, ketosis-prone, juvenile or adult diabetic, phenformin's greatest contribution has been towards better control of the diabetes when used as an adjunct to insulin. Its usefulness in this group of patients is largely in controlling the extreme lability when present. Patient enthusiasm is a reflection of lessened fear of wide swings of hyperglycemia and hypoglycemia.

Because it is more consistently effective over the full range of diabetes, phenformin is at present the most valuable of the oral blood-sugar-lowering agents.

Like insulin and the other oral hypoglycemic agents, however, it does not release the patient or the physician from the responsibility of vigil and adherence to a properly regulated diet and other sound principles of diabetes management. ◀

Intra-Articular Injections of Triamcinolone Acetonide in Arthritic Conditions

DONALD S. MILLER, M.D.,* Chicago, Illinois

►Palliation of symptoms in various arthritic diseases was obtained in 17 of 25 patients, four additional patients having a fair response to therapy. Temporary exacerbation of symptoms occurred in two, no other untoward effects being noted. One to five injections were given at three- to 14-day intervals.◀

Intra-articular injection of corticosteroids provides a method of local treatment of the joint symptoms of arthritis¹⁻⁴ including inflammation, pain, swelling, stiffness, and lack of mobility. Only palliation may be feasible for some patients, particularly those with osteoarthritis. Palliation in treating arthritic diseases is essential to the functional, social, and economic rehabilitation of all arthritic patients, even those in whom extensive impair-

ment has occurred. Relief of pain is an important element in the prevention and treatment of causalgic states, which, if they do not subside spontaneously or are not controlled, may lead to chronic reflex dystrophy, continuous pain, contractures of tendons and joints, decalcification of bone, deformity, disability, and finally, a mental fixation on this intractable lesion.⁵

A new synthetic corticosteroid, triamcinolone acetonide†, has been used for intra-articular, intrasynovial, and intrabursal injection of painful and inflamed joints of rheumatoid arthritis, osteoarthritis, gout, and various localized disorders such as traumatic arthritis, tennis elbow and bursitis.⁶⁻⁸ Relief from local joint symptoms was obtained with the

*Department of Orthopedic Surgery, Chicago Medical School, and Mt. Sinai and Cook County Hospitals.

1. Boland, E. W., *Geriatrics*, 13:190, 1958.

2. Savastano, A. A., *Rhode Island M.J.*, 38: 689, 1955.

3. Schwartz, S., *Monographs on Therapy*, 3: 51, 1958.

4. Duff, I. F., *Postgrad. Med.*, 19:577, 1956.

†Kenalog®, E. R. Squibb & Sons, New York.

5. Miller, D. S., & de Takats, *Surg., Gynec. & Obst.*, 75:558, 1942.

6. Urist, M. R., *Clinical Research Notes*, Vol. 3, 1960.

7. Abrams, N. R., *Clinical Research Notes*, 3: 14, 1960.

8. Hauser, E. D. W., *Clinical Research Notes*, 3:2, 1960.

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instillation of small doses of triamcinolone acetonide, from 5 mg. to 20 mg.^{6,7} This report confirms the successful use of this agent in small doses to control joint symptoms in arthritis and related conditions.

Materials and Methods

In my private practice 25 patients, aged 25 to 72, were given intra-articular injections of triamcinolone acetonide for the relief of local joint symptoms. The patients had a variety of joint disorders ranging from osteoarthritis, rheumatoid arthritis, and traumatic arthritis to bursitis, synovitis, Baker's cyst, and other miscellaneous joint involvements. Two patients had causalgic states. Those patients with osteoarthritis were in the fifth to eighth decades of life, except for one aged 43. The patients were of both sexes.

A sterile, aqueous solution containing 10 mg. of triamcinolone acetonide per cubic centimeter was injected into the involved joint in each case. Dosages varied from 10 mg. to 20 mg. (1 cc. to 2 cc. of suspension) per injection. Most of the patients received one to three injections, two received four, and one had five injections. Intervals between varied from three to 14 days. Rigid aseptic techniques were employed in the administration of the medication.

Results

As shown in the table, an excellent or good response to therapy was obtained in 17 of 25 patients (68%), fair responses were seen in four cases (16%), poor responses were observed in two subjects (8%), and two had questionable responses (8%). The two patients with diagnoses of causalgia responded well.

The two patients whose responses to the intra-articular injections of triamcinolone acetonide were poor had a diagnosis of bursitis. One of them experienced moderate to severe pain for the first 36 hours after the injection. The second of these patients experienced a temporary exacerbation of symptoms. Neither joint infection nor hemorrhage due to the injections occurred.

Discussion

The overall results of this study were encouraging, because joint symptoms were alleviated in so high a percentage of patients. In this series 84 per cent manifested excellent, good, or fair responses to intra-articular injections of triamcinolone acetonide.

The cases of causalgic state are of particular interest. The two patients with this malady were benefited by the therapy under study. These responses

TABLE 1
RESULTS IN 25 PATIENTS TREATED WITH INTRA-ARTICULAR
INJECTIONS OF KENALOG

DIAGNOSIS	NUMBER OF PATIENTS	RESPONSE TO THERAPY				
		EXCELLENT	GOOD	FAIR	POOR	QUESTIONABLE
Osteoarthritis	8	1	6	1	0	0
Rheumatoid arthritis	1	0	0	0	0	1
Traumatic arthritis	3	0	3	0	0	0
Synovitis	2	0	1	0	0	1
Osteochondroma with arthritis	1	0	0	1	0	0
Bursitis	3	0	1	0	2	0
Arthritis	1	0	1	0	0	0
Peri-arthritis	1	0	0	1	0	0
Arthritis with synovitis	1	0	1	0	0	0
Baker's cyst	1	0	1	0	0	0
Paget's disease with arthritis	1	0	0	1	0	0
Causalgic states	2	0	2	0	0	0
TOTALS	25	1	16	4	2	2

are noteworthy, for by suppressing pain and interrupting the progress of this condition, it would seem possible to avert the chronic, irreversible and disabling complications that may ensue in this syndrome. The results suggest that it would be advisable in such cases to pursue continued and aggressive treatment.

Two patients had an exacerbation of symptoms following intra-articular injection of triamcinolone acetonide, but there were no evidences of untoward reaction during the study. Triamcinolone acetonide is a promising agent for the palliation of local joint symptoms in arthritic and allied conditions.

Summary

1. Twenty-five patients (eight with osteoarthritis, two with causalgic states, and 15 with a variety of arthritic and joint involvements) received from one to five intra-articular injections (10 to 20 mg. each) of triamcinolone acetonide at intervals of three to 14 days.

2. Based on the amelioration of local symptoms, results were encouraging. Seventeen patients had excellent or good responses, four patients exhibited a fair response, two subjects had poor responses and two had questionable responses. The two patients with causalgic states responded well.

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3. Untoward reactions to the medication were seen in only two patients who experienced a temporary exacerbation of symptoms following the injection. Other side reactions were not observed. Hemorrhage or infection due to the injections did not

occur.

4. Triamcinolone acetonide, injected into the involved joint, is a promising agent for the relief of arthritic symptoms. It appears useful in the control of pain and the course of the syndrome in causalgic states. ◀

Blind Study of Chlorpromazine and Chlordiazepoxide in Hospitalized Patients

A comparative blind evaluation of a placebo, chlorpromazine, and chlordiazepoxide was undertaken in patients (predominately chronic schizophrenics) matched on the basis of age, duration of illness, and predominant symptomatology. Duration of study was 14 weeks, dosage range from 150 to 700 mg. daily of each drug.

In the 13 given chlorpromazine the response was moderate in one patient; in the 13 given chlordiazepoxide the response was maximal in one, moderate in 2, and minimal in 3 patients. There was no change in 8 patients treated with chlorpromazine and in 5 treated with chlordiazepoxide. Worsening of the condition was noted in 4 chlorpromazine-treated, and 2 chlordiazepoxide-treated patients. Of the placebo group (15 patients) 5 showed no change and 10 became worse.

Extrapyramidal stimulation was seen in 4 patients receiving more than 400 mg. daily of chlorpromazine and in 4 patients receiving above 600 mg. daily of chlordiazepoxide. At the respective dosage level, ataxia was observed in 3 chlorpromazine-treated and in 2 chlordiazepoxide-treated patients. Hypermotor activity was observed in 2 patients receiving more than 150 mg. per day of chlordiazepoxide. There was no evidence of toxicity.

Chlordiazepoxide proved effective for the relief of anxiety, with an associated improvement in social behavior in an additional group of 143 psychiatric patients. Patients entered into treatment and ward activities more readily and in most cases were more accessible to therapy.

Smith, M. E., *Connecticut Med.*, 25:153-157, 1961.

Efficacy of a Combined Hydrosorbent and Anticholinergic in Treating Diarrheas from Varied Causes

MANUEL KAUFMAN, M.D., and
HOWARD M. TRAFTON, M.D.,* Brookline, Massachusetts

►Good to fair response was attained in 93 of 95 patients given a combination of thihexinol methylbromide and polycarbophil for three to four days. Side effects which occurred in 12 patients included dryness of the mouth and throat in 11, tachycardia in six, and temporary anuria in one patient. ◀

Although diarrheas are often indicative of serious conditions for which each patient should be carefully examined and treated, an agent for symptomatic management has been sought with varying degrees of success. For such symptomatic relief of diarrheas, regardless of cause, requirements of a satisfactory agent would include reduction of fluid in the stool and blocking of intestinal motor impulses through the parasympathetic nerves.

A drug† which combines both of these qualities is proving very helpful in controlling diarrheal states from a variety of causes. Each tablet contains 500 mg. polycarbophil, a macromolecular substance which specifically absorbs water from the alkaline medium of the small intestine and colon and produces a stool of normal consistency.¹ Each tablet also contains 15 mg. of the anticholinergic thihexinol methylbromide, whose action is limited almost entirely to inhibition of intestinal motor function.² Safety of use for long periods was demonstrated by daily administration of polycarbophil for two years, with no resultant gastrointestinal irritation or systemic toxicity,³ and by daily ad-

†Sorboquel®, White Laboratories, Inc., Kenilworth, New Jersey.

1. Pimparkar, B. D., et al., To be published in *Gastroenterol.*

2. McHardy, G., et al., *Am. J. Gastroenterol.*, 24:601, 1955.

*From the Sias Research Laboratories, Division of Clinical Pathology, Brooks Hospital, Brookline, Mass.

TABLE 1
CLINICAL RESPONSE TO SORBOQUEL

DIAGNOSIS	NUMBER OF CASES	RESPONSE		
		GOOD	FAIR	POOR
Dumping syndrome after gastrectomy & vagotomy	1	1		
Acute gastroenteritis (viral origin)	33	33		
Ileocolitis	7	7		
Acute enterocolitis	3	2	1	
Acute enterocolitis, irritable colon	22	22		
Acute colitis	2	1	1	
Colitis, irritable colon	1	1		
Functional mucous colitis	1	1		
Diverticulosis of colon	7	4	3	
Spastic colitis with hypoadrenalism	1			1
Idiopathic diarrhea	6	6		
Antibiotic diarrhea	10	10		
Acute diarrhea, origin unknown	1	1		
TOTALS	95	89	5	1

ministration of thihexinal methylbromide for three years.⁴ When these two drugs were given together, they were effective in lower dosage than when either was used alone.⁵

Method and Procedure

Ninety-five patients with acute and chronic diarrheas of varied causes were treated with this drug (see Table 1). Patients had been experiencing from four to 14 liquid movements per day for continuous or intermittent periods ranging from less than 24 hours up to 10 years. Results of

previous managements, which had usually included paregoric and some form of kaolin, had been poor to fair.

The usual dosage given was one tablet three times daily (in 65 cases) or four times daily (in 27 cases). In only three cases was a dose of two tablets given, and in two of these, side effects suggested that this dose was too high. In most cases medication was continued for three to four days. In only 12 cases was it continued more than four days, the maximum being 14 days, although in all but one of these, definite response was evident in less than four days.

Results

Response in 21 patients was

3. Grossman, A. J., et al., *J. Am. Geriat. Soc.*, 5:187, 1957.

4. McHardy, G., Unpublished observations quoted by Hock, C. W., *Med. Times*, 88: 320, 1960.

5. Gilbert, S. S., et al., *Am. J. Gastroenterol.*, 34:619, 1960.

dramatic after the first dose; an additional 52 responded within 24 hours with a reduction in number of bowel movements and with stools of more normal consistency. One patient, with a diagnosis of spastic colitis with hypoadrenalism, in whom medication had been discontinued after two days because of side effects, showed no improvement. A second patient with diverticulosis with mucous colitis failed to have normal bowel movements after 14 days, although there had been some reduction in number and slight improvement in consistency. Although the diarrhea was stopped, two patients with diverticulosis of the colon had persistent cramps. All others had responded within 72 hours, passing one or two normally soft stools daily. In several cases of antibiotic-induced diarrheas, response to this drug was excellent, with no interruption of, or interference with, antibiotic treatment.

Side Effects

In 83 of the 95 cases there were no side effects. The most common side effect, found in 11, was thirst or dryness of mouth and/or throat. This had a tendency to develop an hour or so after medication and to persist for 30 to 90 minutes. One of these experienced nausea, considered by the physician to be

due to the viral infection. Five of the 11 also experienced tachycardia, and one developed cramps. Another experienced anuria four hours after taking two tablets, with bladder distended half way to the umbilicus, but recovered in another four hours. Possibly the dose was too high, although it reduced the number of bowel movements to normal. Dysuria or anuria and abdominal distention have also been reported in a few other cases in which initial doses of three or four tablets were given.⁶ One case of tachycardia also appeared in a patient who had been on a dosage of two tablets three times daily for two days.

In three instances medication was discontinued because of side effects—the two in which double the usual dosage was given, and the one in which the patient developed tachycardia and cramps. The first signs of intolerance, dryness of mouth and throat and tachycardia, when they do occur, usually appear within two to four hours of medication and are not likely to make their appearance later than two days after initiation of treatment.

Summary and Conclusions

1. Ninety-five patients with acute or chronic diarrheas from

6. Winkelstein, A., *Am. J. Gastroenterol.*, 34: 524, 1960.

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various causes were treated with a tablet combining polycarbophil and thihexinol methylbromide, with good to fair response in 93.

2. Antibiotic-induced diarrheas responded with no interruption of, or interference with, antibiotic therapy.

3. Optimum dosage appeared to be one tablet three times daily for three to four days.

4. Side effects were absent in

83 cases. Dryness of mouth and throat occurred in 11 and tachycardia in six. Temporary anuria occurred in one in which a two-tablet dose was given.

5. While this drug is effective in symptomatic control of all types of diarrheas, it should be so used as an adjuvant, and not as a substitute for proper diagnosis and treatment of underlying causes. ◀

Obesity in Childhood: Clinical Trial of Phenmetrazine

Children in the trial all weighed over 90% above the average for their age, and all were gaining weight. They were sent to the pharmacist, who selected at random a paper from an envelope, stating whether the child was initially to be given phenmetrazine (Preludin) or placebo tablets. Sufficient tablets for 28 days were dispensed. The dose was 25 mg. twice daily for those 8 years and over, and 12.5 twice daily for those under 8. After 28 days the child was weighed and given a further supply of opposite tablets, so that each child acted as his own control. After another 28 days the child was again weighed. Only the pharmacist knew which tablets the child received until after the results were tabulated.

Twenty-one children completed the trial. While receiving phenmetrazine 18 children lost ½ to 8 pounds (average, 4), 2 remained stationary, and one gained 4 pounds. While receiving placebo tablets, 17 gained 1 to 5 pounds, 2 remained stationary, and 2 lost 1 and 1½ pounds respectively. None of the children complained of any ill effects, though one child became very ill-tempered and her parents stopped giving her the drug. In order to discover the effect of phenmetrazine, no dieting was allowed in the test. Appropriate dietetic measures should be the mainstay of treatment, and only if that fails should phenmetrazine be introduced as a useful adjuvant.

Rendle-Short, J., *Brit. M.J.*, 1:703-704, 1960.

Clinical Evaluation of Topical Methylprednisolone

Z. CHARLES FIXLER, M.D., Cincinnati, Ohio

►Two preparations, one containing methylprednisolone only and one containing methylprednisolone and neomycin in a special skin lipid base, were used in treatment of 60 patients with various dermatoses. Of these, 55 (92 per cent) had good results. The special base prompted rapid absorption of the medication.◄

Two topical methylprednisolone preparations in a creme base were used in the treatment of 60 patients with various dermatoses. No other topical therapy was used. Whether their dermatitis was acute or chronic, patients were told to apply the creme sparingly to affected areas three to four times daily for periods ranging from one week to three months.

Both preparations used contained methylprednisolone acetate 0.25%* and one also contained neomycin sulfate 5 mg./Gm.† These active medicaments

were suspended in a creme base, which qualitatively and quantitatively approximates in composition the oily constituents of the normal human skin. The base contains 10 per cent saturated and 20 per cent unsaturated free fatty acids, 25 per cent triglyceryl esters of fatty acids, 17 per cent other esters of fatty acids, 5 per cent saturated and 5 per cent unsaturated hydrocarbons, and 12 per cent higher molecular weight alcohols.

Results

Results of treatment with these preparations are summarized in Table 1 and Table 2. Ninety-three per cent of patients treated with methylprednisolone creme had good results and 88 per cent treated with neomycin-methylprednisolone creme had good results. The principal symp-

*Veriderm Medrol™, The Upjohn Company, Kalamazoo, Michigan. Each Gram contains methylprednisolone 2.5 mg. (0.25%) or 10 mg. (1.0%) in a special skin lipid base.

†Veriderm Neo-Medrol™, The Upjohn Company, Kalamazoo, Michigan. Each Gram contains methylprednisolone 2.5 mg. (0.25%) or 10 mg. (1.0%) and neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base).

TABLE 1
RESPONSE TO TOPICAL METHYLPREDNISOLONE CREME

DIAGNOSIS	No. OF PATIENTS	RESULTS			
		GOOD	FAIR	POOR	ADVERSE
Contact dermatitis	8	7			1
Drug eruption	1	1			
Hand Dermatitis	3	3			
Infantile eczema	2	2			
Infectious eczematoid dermatitis	1	1			
Insect bites	3	3			
Neurodermatitis	9	8	1		
Rhus dermatitis	4	4			
Seborrheic dermatitis	7	6	1		
Stasis dermatitis	4	4			
Tinea pedis	1	1			
TOTALS	43	40	2	0	1

TABLE 2
RESPONSE TO TOPICAL
NEOMYCIN-METHYLPREDNISOLONE CREME

DIAGNOSIS	No. OF PATIENTS	RESULTS			
		GOOD	FAIR	POOR	ADVERSE
Contact dermatitis	2	1		1	
Drug eruption	1	1			
Hand dermatitis	6	5		1	
Infantile eczema	2	2			
Infectious eczematoid dermatitis	2	2			
Seborrheic dermatitis	1	1			
Tinea pedis	3	3			
TOTALS	17	15	0	2	0

tom, pruritus, was relieved in minutes following application of either creme. After three or four applications, continuous relief of the symptom was experienced by most patients.

The new sebum-like base used in these preparations probably contributed somewhat to the superior results by promoting rapid absorption of the medication by the skin and by the solution of

occlusive problems. The study was carried out during the warm months, and it was noted that the preparations could be used in intertriginous areas without difficulty.

Methylprednisolone and neomycin - methylprednisolone, in a creme base, were used in treatment of 60 patients with various dermatoses. Of these, 55 (92 per cent) had good results. ◀

A Clinical Study with Glyceryl Triacetate

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►This preparation was effective in 22 of 25 patients with various types of dermatomycoses. Clinical improvement was observed within one week after initiation of therapy in the majority. There were no evidences of topical or systemic side effects, and no evidence of tolerance developed.◄

Fungus infections frequently represent a problem to the practitioner because of their high incidence and because dermatomycoses are so often resistant to therapy. Treatment, even when temporarily effective, often is disappointing because of frequent recurrences. Continuous prophylactic therapy is usually necessary to prevent reinfection, and prolonged use may cause the development of tolerance to the preparation. Thus, a dilemma exists which can be trying to both patient and physician.

A New Preparation

Glyceryl triacetate* has been

*Fungacetin®, The G. F. Harvey Company, Inc., New York. The ointment contains 25% triacetin (glyceryl triacetate) in a water-soluble base, and the liquid contains 30% triacetin in a specially denatured alcohol base.

reported to be highly effective and safe in the topical treatment of common fungus infections.^{1,2} Moreover, this agent has been reported to be free of the side effects frequently encountered with other fungicides.³ Because of these reports and less than satisfactory experience with other agents, it was decided to subject Fungacetin to a clinical trial. Liquid and ointment forms were used in the treatment of common dermatomycoses, particularly tinea capitis, tinea cruris, tinea pedis and tinea versicolor.

Method

In this study, 25 adults and children aged 7 to 72, were treated with Fungacetin ointment and liquid. The dermatomycoses treated were tinea versicolor, two patients; tinea capitis, eight patients; tinea cruris, seven patients; and tinea pedis, eight patients.

1. Johnson, S. A. M., & Tuura, J. L., *Arch. Dermat.*, 74:73-75, 1956.

2. Cahn, M. D., & Levy, E. J., *Int. Rec. Med.*, 172:305-309, 1959.

3. Rosnick, M. J., *Medical Times*, 87:1653, 1959.

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Fungacetin was prescribed twice daily, the ointment alone being used in 15 patients and the liquid alone in nine. One patient suffering from tinea capitis of the scalp (postauricular area) and eyebrows was treated with both forms simultaneously. Length of treatment varied with the extent and severity of infection: The majority of patients were treated from two to four weeks, therapy being continued until complete remission of symptoms occurred or until the degree of improvement plateaued. Fifteen patients had not responded to previous therapies, including undecylenic acid, coal tar-salicylic acid preparation, calamine, ammoniated mercury, sulfur-resorcin, 10% sodium thiosulfate, potassium permanganate, gentian violet and Whitfield's ointment.

Results

The results of therapy were evaluated according to clinical improvement in scaling, inflammation, maceration, erythema, papules and eczematous changes. The degree of subjective improvement in itching, burning and discomfort was also weighed. Results were classified as excellent when there was complete improvement with remission of symptoms in one week and no recurrence when therapy was discontinued; good when there

was considerable improvement, but less than excellent; fair when there was partial and temporary improvement; and no response where there was little or no improvement.

Fungacetin ointment and liquid produced excellent or good results in 22 patients (88 per cent), and fair results in three patients. Substantial clinical improvement was observed within a week in 22 (88 per cent). In this group, complete or substantial abatement of symptoms such as itching and burning was noted within two to three days after the beginning of therapy. No patient failed to benefit from treatment. No untoward topical or systemic side reactions were noted, and there were no indications of the development of tolerance to the preparation. Of 15 patients who had demonstrated refractoriness to other therapies, 12 (80 per cent of those refractory) achieved excellent or good response to Fungacetin therapy.

Discussion

In perhaps no other condition is the range of possible remedies greater than in the treatment of dermatologic disorders. However, because of the limitations and systemic side effects reported from the use of oral fungicides, the specific technique of external local treatment, with exceptions, still constitutes the

most useful and effective means of treating cutaneous conditions.

However, the selection and use of external remedies is a delicate and frequently trying assignment, particularly because individual responses to therapy are so varied, and because chemical action and physical properties of the agents employed are as important as the selection and quantity of active ingredients. Because of its composition and mode of action, Fungacetin gives controlled, effective, and safe fungicidal activity, within the above mentioned contexts, through the release of the active fungicidal agent to the infected site by enzymatic hydrolysis of triacetin. This sustained release is assured⁴ so long as the precipitating enzyme esterase is present in the fungus and infected skin.

Fungacetin is nonirritating, nonkeratolytic and is not absorbed, assuring freedom from irritation, tolerance, toxicity or allergenic reactions. This is particularly important because many topical fungicides, although effective, cause irritation which may lead to re-infection. Moreover, the freedom from adverse side effects is significant, because orally administered antifungal agents have been reported to cause a number of adverse side effects.

Patient acceptance of Fungacetin was excellent because the preparations do not stain, are completely water washable, and are free from disagreeable odor. This advantage is not unimportant because success in the treatment of cutaneous disorders depends, in a measure, on the cooperation and repeated reliable application by patients when at home.

Summary

Fungacetin, in the ointment and liquid forms, was used to treat 25 patients with various types of dermatomycoses. Excellent or good results were observed in 22 patients (88 per cent). In this group, substantial clinical improvement was observed within one week after initiation of therapy. Of 15 patients resistant to previous therapies, 12 (80 per cent of those refractory) experienced excellent or good responses to Fungacetin preparations. Twenty patients (80 per cent of the total group) found the agents to be highly acceptable. No patient failed to benefit from therapy, and no untoward topical or systemic side reaction was noted. No indication of development of tolerance was observed. Fungacetin preparations manifested highly effective and safe antifungal actions in the treatment of a variety of fungus infections of the skin. ◀

4. Knight, S. G., *J. Invest.*, 28:363-366, 1957.

Reduction in Elevated Blood Cholesterol Levels with Lipomic Injection

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►In 71 patients, bi-weekly injection of 2 cc. of lipomic material produced an average decrease in plasma cholesterol of 24.2 per cent. Those with the highest initial levels experienced the most profound fall. Results were considered at least equal to those which have been obtained with oral nicotinic acid.◄

The maintenance of normal concentration of lipids in the blood appears more and more to be an accepted requirement for the maintenance of normal health. While the full significance of cholesterol in human metabolism has not yet been revealed, the frequent association of elevated cholesterol and other lipids in the blood with clinical atherosclerosis has been demonstrated repeatedly.¹

Etiology of Atherosclerosis

Many factors are seriously considered in the etiology of

atherosclerotic disease. There is evidence that an increase in dietary saturated fats (of animal origin) and not dietary cholesterol (an unsaturated fat of plant origin) raises plasma lipids. This has given rise to the substitution of unsaturated fats for saturated fats in the diet of a large part of the United States public to a degree approaching that of food faddism by some, and has raised storms of controversy as to the advisability of such a dietary approach.^{2,3}

That many more men than women suffer from coronary artery occlusion and die from coronary disease early in life is well known. This sex difference in the predisposition to atherosclerotic disease is thought by some to be caused by a difference in dietary habits of men and women. Others attribute it to the protective action of estrogens. **Familial oc-**

1. Gertler, M. M., et al., *Circulation*, 2:205, 1950.

2. Keys, A., et al., *Ann. Int. Med.*, 48:83, 1958.

3. Yudkin, J., *Lancet*, 2:155, 1957.

currence of coronary artery disease points toward a genetic factor. Psychologic factors have long been incriminated in the pathogenesis of cardiovascular disease. Osler, some 40 years ago, reported that the largest contingent of his patients with angina pectoris were men "leading lives of high tension, who eat, drink and smoke to excess." While stress may precipitate coronary artery attacks and probably accelerates lipid deposition and coagulation of blood, in persons on diets low in animal (saturated) fats, stress apparently does not cause atherosclerosis.^{4,5}

The physician faced with the task of lowering elevated blood cholesterol generally recognizes the great difficulty in controlling either dietary habits or psychologic factors of his patients. Men, particularly those actively engaged in their businesses or professions, encounter much emotional tension and often need to dine out with clients. Others are unwilling to adhere to strict dietary measures, and find it even more difficult to escape the anxieties of our ever-accelerating pace of living. Many men entertain at lunch and dinner; the addition of alcohol can cause a sustained hyperlipemia, perhaps by reason of a relative metabolic insufficiency, or of an increased

state of lipid metabolism by the liver.⁶ Reasons such as these have helped stimulate a wide search for agents which can substitute for dietary measures or relief of stress in a regimen designed to lower blood cholesterol. For this reason, lipomic material* was assembled in an injectable form.

The usually effective dosage of the material is 1 or 2 cc. twice weekly injected intramuscularly. Nicotinic acid has received particular attention recently as a hypocholesterolemic agent when given in large oral doses. Heparin, which has been shown to reduce plasma lipids, is not effective when given orally (as is nicotinic acid) and must be administered parenterally. Cyanocobalamin and folic acid have been included because of their known activity as coenzymes in various cellular metabolic activities, including some involved in the Krebs cycle and its interaction via the two carbon fragments with the anabolism and catabolism of fat. Choline, a proven lipotropic agent, has been theoretically involved in transmethylation reactions linking amino acid and fat metabolism, and in-

**Lipomic Injection*TM, Chicago Pharmacal Company, Chicago, Illinois. Each cc. contains heparin sodium, 2,300 units (25 mg.); choline chloride, 50 mg.; inositol, 50 mg.; cyanocobalamin (vitamin B₁₂), 100 mcg.; folic acid, 2 mg.; niacinamide, 35 mg.; niacin (nicotinic acid), 15 mg.; and benzyl alcohol, 1.5%.

6. Amatuzio, D. S., & Hay, L. J., *Arch. Int. Med.*, 102:173, 1958.

4. Questions and Answers, *J.A.M.A.*, 165:2140, 1957.

5. Dock, W., *J.A.M.A.*, 170:152-156, 1959.

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ositol has been experimentally demonstrated to exhibit lipotropic activity, particularly in rats.⁷ The formulation of lipomic material thus allows for simultaneous administration of several active agents which may have different mechanisms of action but similar, possibly potentiated, results.⁸⁻¹¹

Methods and Material

Lipomic material was administered to 71 patients whose plasma cholesterol levels were consistently over 250 mg.%. These patients had at least one blood cholesterol determination six months prior to the onset of the investigation. Many of the patients were selected for cholesterol screening on the basis of some complaint referable to the cardiovascular system, although electrocardiographic findings were positive in only 11 cases of the entire series. There were 55 males and 16 females. All were given lipomic material in an initial dose of 1 cc. intramuscularly, twice during the first week, and thereafter in a dose of 2 cc. twice a week, if tolerated.

This treatment was continued for an average of 99 ± 11 days.

7. Goodman, L. S., & Gilman, A., *Pharmacological Basis of Therapeutics*, Macmillan Co., 1955.
8. Achor, R. W. P., & Berge, K. G., *M. Clin. North America*, 42:781, 1958.
9. Friedman, N., & Byers, S. O., *J. Clin. Invest.*, 38:1328, 1959.
10. Altschul, R., *GP*, 21:115, 1960.
11. Parsons, W. B., Jr., & Flinn, J. H., *J.A.M.A.*, 165:234-238, 1957.

This average includes the treatment periods of two patients who were given lipomic material for only 39 and 36 days, respectively, for reasons beyond our control, and one who was treated unsuccessfully for 208 days. During the period of treatment, no dietary restriction was enforced and no medication that might be considered anticholesterol was administered. The great majority of the men were actively engaged in businesses or professions while under treatment. Obesity was present in 39 patients; 27 had initial cholesterol blood levels of 350 to over 500 mg. per 100 cc.; 25, levels of 300 to 350 mg. per 100 cc.; and 19, levels of 250 to 300 mg. per 100 cc. The average age was 54 years for both sexes, and also for each group separately. The number of women treated was less than one-third that of men.

Results

There was a definite and consistent fall in serum cholesterol levels in all but three patients. The average percentage decrease for the entire group of 71 patients was 24.2 per cent. If the six patients whose decrease in cholesterol was less than 20 mg. per 100 cc. are omitted, the average percentage decrease for the remaining 65 patients rises to 38 per cent.

Three patients showed no

change in plasma cholesterol levels whatever. One was treated for 208 days; although the final cholesterol level was of the same magnitude as the initial, levels during treatment rose to as high as 298 mg. per 100 cc. This patient ate ice cream daily and used butter and cream liberally. A second patient was treated for 63 days, when further treatment was refused. A third case was that of a patient with obesity and diabetes mellitus, who ate considerable amounts of foods containing saturated fats.

In none of the patients who had exhibited a positive ECG was there any change in this finding, despite an improvement, or normalization of blood cholesterol levels. Two of the patients in the series had relief of anginal symptoms, and this may have been due to the use of vasodilators. One other patient, a woman, obtained relief from menorrhagia and dysmenorrhea. This was an isolated observation, and the patient has left the country so that repeat studies could not be done.

Side effects were minimal in all cases. About 30 per cent of the patients experienced flushing at some point in the course of treatment, but this was alleviated by reducing the dose from 2 cc. to 1 cc. Eight patients developed ecchymoses at the injection site on one or two occasions;

this was probably related to the injection technique rather than to the drug itself.

Discussion

In a recent study of 50 patients with hypercholesteremia treated with large oral doses of nicotinic acid for approximately three months, the average reduction in the concentration of plasma cholesterol was 17 per cent.⁸ In our study, an average decrease of 24.2 per cent occurred with all patients; if six unresponsive patients are omitted, the reduction is 38 per cent. Both studies covered a limited number of patients and no valid statistical conclusions can be drawn from study groups as small as these. If 250 mg. per 100 cc. is taken as the upper normal limit of plasma cholesterol, about one-half of our 71 patients achieved normalization of their cholesterol levels. The higher the initial cholesterol blood level, the more pronounced the fall under treatment. The lipomic material caused no signs of toxicity and the occasional patient who experienced some flushing could be relieved by a temporary reduction in dosage.

Summary

Lipomic material, 2 cc., was injected intramuscularly twice weekly, for an average of 99 days

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in 71 patients with abnormally high plasma cholesterol levels. It produced an average decrease in plasma cholesterol of 24.2 per cent. Patients with the highest initial levels experienced the most profound fall. About one-

half of the patients treated experienced a normalization of plasma cholesterol during treatment. The results were considered at least equal to those obtained with large oral doses of nicotinic acid. ◀

Changing Concepts in Therapy of Cancer

For the patient with head and neck cancer, in Europe radiation is the usual choice, while in the United States surgery is generally preferred. Selection at one hospital is based on the best results obtained by either method for the various anatomical sites. In some cases both radiation and surgery are used. In some instances recurrence of disease after the use of one method can be controlled by the other. At one time, the chance of delayed healing, necrosis, and hemorrhage after irradiation was thought to preclude surgical intervention. Similarly, surgical resection with resultant scar tissue formation was believed to make any subsequent use of irradiation valueless. Later experience has shown that these considerations are not necessarily valid if sequential treatment is carefully timed.

The most important criterion is cure; the next, function; the third, cosmetic result. Surgical excision is customary for pa-

tients with carcinoma of the lip, curative and functional results being the same with either, but a better cosmetic result is achieved with surgery. Curative results in early vocal cord cancer by either surgical or radiation therapy are the same, but a patient treated by radiation regains his normal voice. If the disease has spread to the supraglottic area or the subglottic space, the treatment is total laryngectomy. Cancer of the extrinsic larynx localized to a small area can be given x-ray therapy initially, since surgical excision is still possible if the disease persists or recurs. For most patients with extensive tumors of the extrinsic larynx, total laryngectomy is necessary.

These are examples of the application of the criteria, but final selection of therapy must be made on an individual basis. A debilitated and aged patient probably should be treated surgically.

Editorial, Cancer Bull., 12:31, 1960.

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Staphylococcal Endocarditis in an Octogenarian: Successful Treatment

G. A. LILLINGTON, M.D., and
DALLAS MEDD, M.D., *Winnipeg, Manitoba*

►A woman of 84 who developed this disease was treated with a total of 91 million units of crystalline penicillin, 20 million units of procaine penicillin, and 25.5 Gm. of streptomycin. Seven months later she was well, had no fever or cardiovascular symptoms, and was very active physically. ◀

Bacterial endocarditis is predominantly a disease of childhood and early adult life. In a recent report the mortality rate in a group of patients over 50 was 72%. *Staph. aureus* is an uncommon cause of bacterial endocarditis; the incidence has increased in recent years, however. Even with antibiotic therapy, the mortality rate is high.

A woman of 84 was admitted to the hospital for investigation of fever. She had been in good health all her life, had consulted a physician only once, in 1942, because of a mild reactive depression after the loss of her husband. She had been very active

physically and was alert mentally.

Presenting Symptoms

Three weeks before admission she noted low back pain and the next day she was feverish, drowsy, and incontinent of urine. At her home a physician noted an apical systolic murmur, temperature of 102. The urine had occasional white cells and granular casts. Treated with an antibiotic for several days, fever subsided; 10 days later there was recurrence of fever, blood pressure was 160/105, and a few rales were heard at the left lung base. Antibiotics were again given, and temperature returned to normal, recurred six days later, and she was sent to the hospital.

On admission she was drowsy, weak, and listless, and had a spiking temperature to 104 each day. The heart was somewhat enlarged and a moderately loud, blowing murmur was heard,

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loudest at the apex and into the left axilla. Mild finger clubbing was noted, blood pressure was 120/60, hemoglobin was 12.2 Gm., red blood count was 4.2 million, and white blood count was 9000 with a normal differential count. Sedimentation rate was 95 mm. in the first hour, BUN 33 mg.%. Several urinalyses showed traces of albumin and small numbers of red and white cells. Tests for brucella, typhoid, paratyphoid and *Proteus* OX 19 were all negative. X-rays showed moderate cardiac enlargement with elongation and atherosclerosis of the aorta; electrocardiogram was normal. A first-drop smear was negative for phagocytic reticuloendothelial cells.

Eight blood cultures, all positive for *Staph. aureus*, coagulase positive, were sensitive (disc test) to penicillin, streptomycin, chloramphenicol, tetracycline, erythromycin, novobiocin, neomycin, and kanamycin.

Therapy

Therapy was initiated with one million units of aqueous crystalline penicillin intramuscularly every 12 hours; procaine penicillin G, 600,000 units intramuscularly daily; and streptomycin, 1 gm. intramuscularly daily. Also, probenecid (Benemid), 0.5 Gm. orally every eight hours, was prescribed.

Temperature became normal within 24 hours. Three days later diarrhea developed, stool culture being positive for *Staph. aureus* and negative for occult blood. Two days later left pleuritic pain and a small left pleural effusion (shown by x-ray) developed. It was considered that a small pulmonary embolism had occurred.

Thirteen days later temperature was 102, with diarrhea, perianal pain, tenderness and erythema. Stool culture was negative. After taking chloramphenicol, 250 mg. four times daily for five days, her fever and diarrhea subsided. Six days later fever and perianal pain developed again, white blood count was 1500, hemoglobin was 10.4 Gm., this being attributed to drugs. Chloramphenicol, streptomycin and probenecid were discontinued. At this time white blood count was 3600, with 14% eosinophils. Four days later, white blood count was 7100, with 14% eosinophils.

Electrophoresis revealed hypoalbuminemia and hypergammaglobulinemia. Stools were negative for parasites and occult blood, sigmoidoscopy revealed no abnormalities, and an upper gastrointestinal series was normal. An attempt to obtain a barium enema was unsuccessful.

Antibiotics were discontinued after 46 days of therapy. The

With its combination of 5 proven therapeutic agents, BRONKOTABS dilates the bronchioles... thins and helps expel thick mucus... combats local edema... offers mild sedation... and treats the allergic component. Gets right to the root of asthmatic distress with minimal side effects, and none of those associated with steroids.

In a study of 40 patients with bronchial asthma, 24 persons (60%) reported BRONKOTABS brought good relief from asthmatic symptoms — ease of expectoration, reduction of bronchospasm and increased vital capacity. Only seven patients failed to respond at all. "The combination of drugs used [in Bronkotabs] gave greater relief in these patients than the conventionally used tablet [ephedrine, theophylline, phenobarbital]..."¹

In another study, 79.7% of 64 asthma patients showed good to excellent response to BRONKOTABS therapy.²

Each tablet contains: theophylline 100 mg.; ephedrine sulfate 24 mg.; phenobarbital 8 mg. (warning: may be habit forming); thenyldiamine HCl 10 mg.; and glyceryl guaiacolate 100 mg. Supplied: bottles of 100 white scored tablets. Usual precautions associated with sympathomimetic amines should be observed.

References: 1. Spielman, A. D.: Evaluation of a Combination Tablet of Theophylline, Ephedrine Sulphate, Phenobarbital, Thenyldiamine and Glyceryl Guaiacolate in the Treatment of Chronic Asthma, *Ann. Allergy* 18:281, 1960. 2. Waldbott, G.: Bronkotabs — A New Antiasthmatic Preparation (Preliminary Report), *Int. Arch. Allergy* 17:116, 1960.

For full information on Breon's five antiasthmatics, see pp. 538-539 of the 1961 PHYSICIANS' DESK REFERENCE plus the 2nd, 3rd, or 4th quarterly supplement.

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Rx Products Division, Breon Laboratories Inc., New York 18, N. Y.

case report

total dosage administered was 91 million units of crystalline penicillin, 20 million units of procaine penicillin, and 25.5 Gm. streptomycin. Since hemoglobin was still only 9.0 Gm., two blood transfusions of 500 ml. each were given which caused symptomatic improvement.

Results

Seven months after admission she felt well, had had no fever or cardiovascular symptoms in

the interval, and was very active physically. Other findings were temperature 98.4, blood pressure 220/110, cardiac murmur unchanged, slight pitting edema of both feet, with pigmentary changes of chronic venous insufficiency. Hemoglobin was 12.9 Gm., sedimentation rate 51 mm. in the first hour; there was 0.2 gm. % albumin with occasional pus cells and red cells in urine, and some cardiomegaly by x-ray. ◀

Canad. M.A.J., 82:980-982, 1960.

Emergency Tracheotomy

The victim of an acutely obstructed airway can fight off suffocation for only a few minutes so that emergency tracheotomy may have to be performed under difficult circumstances. An airway can be obtained in 1 to 2 minutes with a dagger-dilator. Holding the larynx firmly, the cricothyroid space is located and with the instrument, the skin and the cricothyroid membrane are punctured. Then the stoma is dilated transversely and a bivalve cannula, with the valves held together, is inserted into the trachea between the blades of the dagger-dilator. If incision of the skin is preferred, the dagger-scissors-dilator can be used. The skin is snipped over the crico-

thyroid space and, with the scissors closed, the cricothyroid membrane is pierced. Then the opening is dilated transversely by opening the scissors and the closed bivalve cannula is inserted into the airway between the blades of the scissors. A tracheal hook may be used to hold the trachea during insertion of the cannula. The inner cannula is then placed into its bivalve cannula. The dagger-dilator and the dagger-scissors-dilator, together with a 2-piece tracheotomy cannula, a skin retractor and tracheal hook are contained in a kit which can be carried in the physician's bag. •

Rube, D. S., et al., *Spectrum*, 8:132-134, 1960.

Current Concepts in Physical Management of Arthritis

LEON M. ROTHMAN, M.D., and
JOSEPH B. ROGOFF, M.D., *New York, New York*

► *Arthritic patients are helped by pharmacologic preparations, physical medicine measures, orthopedic devices, surgery, psychotherapy, and services of vocational counselors and medical social workers. Therapeutic goals should be based on comprehensive study and modified from time to time in individual cases.* ◀

The objectives of therapy in the arthritic patient are to arrest disease, relieve symptoms, prevent deformity, correct deformity, improve function, and achieve total rehabilitation.

Relief of Symptoms

Colchicine is best for acute gouty arthritis; salicylates, corticosteroids, and phenylbutazone for various arthritides; and roentgen therapy for rheumatoid spondylitis. Heat dilates blood vessels, increases blood flow, relaxes muscle spasm, increases metabolic activity, and is analgesic. Full body hydrotherapy given three times weekly is

gratefully received and therapeutic exercises are permitted. Moist heat locally administered is a pain reliever. The brisk motion of a whirlpool bath seems to enhance the analgesic effect of heating and higher temperatures can be tolerated in a whirlpool. Hot packs are extremely useful and acceptable. Short-wave diathermy is probably best for heating the deep tissues in chronic or subacute phases of arthritis. The paraffin bath is popular for joints of the hands and wrists.

Preventing Deformity

The use of cervical traction along with thermotherapy in cervical osteoarthritis merits special attention. Indications of a tendency toward deformity must be sought and combated by maintenance of good posture in lying, sitting, or standing, and maintenance of strength and efficiency in the muscles and ligaments.

Limitation of the range of motion must be prevented by early therapeutic exercises in the hospital, clinic, or physician's office, and home exercises must be insisted on and adequate instructions given for them.

Muscle weakness is frequently seen in the vicinity of osteoarthritic joints. Attempts to correct this by therapeutic exercise of the resistive type should be made, preceding the exercise therapy with some form of heat.

Splints for joints which are swollen and painful put the part to rest and prevent deforming contractures. They are especially useful for maintaining extension at the knee and functional position of fingers and wrists. Splints may be made of plaster, plastics, or aluminum and should be easily removable so that exercises can be given. Supports are frequently needed only as night-resting splints. Braces may be indicated to support inflamed and weakened joints and to control various deformities, such as genu recurvatum and flexion tendencies of the spine.

In rheumatoid spondylitis, most important is the prevention of deformity by use of x-ray therapy and various drugs. It is important to maintain as good posture as possible so that when ankylosis ultimately occurs, it will be in as functional and cos-

metic a position as possible. These patients should rest on a firm bed with a bed board between spring and mattress and should use no pillow or at most a small one. A small pillow placed under the dorsal spinal region will aid in the attempt to maintain spinal extension. Postural exercises must be well supervised and long continued. Breathing exercises should be prescribed for every patient with rheumatoid spondylitis. Before fixation of the rib cage, thoracic breathing is stressed; once the ribs have become immobile, abdominal breathing exercises help maintain vital capacity at as high a level as possible.

Correction of Deformity

Flexion contractures, if not too fixed, may respond to judicious stretching. Treatment with ultrasound softens contracted tissues and helps to render them extensible. Progressive splinting for a flexed knee or elbow may be effective. Removable splints are better than casts, since they allow exercise periods. Wedging casts and casts with hinges and turnbuckles are useful in some cases.

"Lively" splints, which exert corrective forces, may prove useful. Spring-loaded braces exert extension forces at the knee. Among the surgical procedures

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necessary to correct some deformities are soft-tissue release operations, osteotomies, synovectomies, arthrodeses, and arthroplasties.

Improvement of Function

Most of the measures suggested in preceding paragraphs will help to maintain or improve function. Most specifically, activities of daily living to be investigated include feeding, transfer, ambulation, dressing, washing, and toileting. Quite often a program of exercise to strengthen weakened muscles and to overcome effects of prolonged bed rest, together with specific training in self-care activities, will improve function considerably. A variety of adaptive equipment is necessary to help some achieve partial or full independence. Some others have to be made for a given patient. A few examples are large or long-handled feeding utensils, various dressing aids, elastic shoelaces, and so forth. It may be important to select suitable types of clothing. Substitution of front zippers for front or back buttons may enable a patient to dress without requiring assistance.

Ambulation may be aided, even made possible, by suppor-

tive devices. For the arthritic patient, crutches frequently require modification. Where wheel chairs are necessary, they should be prescribed individually.

Total Rehabilitation

This implies a maximum adjustment to living by the full utilization of residual function. This goal involves psychosocial factors. To help a properly motivated patient to seek employment within his physical limits may require rather intensive work in vocational rehabilitation.

Children afflicted with severe arthritis must not be allowed to become recluses. Means for them to be exposed to other children must be found. Their life experience must be greater than that imposed by confinement to a small apartment; their education must continue, and if they are not suitable for special classes for handicapped children, home teachers can be provided in most urban centers.

The medical social worker is a member of the rehabilitation team whose services are often not utilized as fully as possible. The social worker can, in many cases, obtain funds from various community sources. ◀

New York J. Med., 61:396-401, 1961.

Hospital Trial of Bactericidal Effect of Hexylresorcinol Aerosol

P. D. J. HOLLAND, F.R.C.P.I., Dublin, Ireland

►About 30 per cent of air-borne aerobic bacteria are pathogenic staphylococci with antibiotic resistance patterns similar to those of organisms isolated from infected patients. Hexylresorcinol aerosol significantly reduced the number of air-borne organisms and the number of dust staphylococcus pyogenes.◄

The ultimate transfer of pathogenic organisms, particularly the *Staphylococcus pyogenes*, during ward cross-infection is mainly by means of air currents. In the case of the staphylococcus it has been clearly demonstrated that the route taken in the case of nasal carriers is from anterior nares and upper lip to fingers and thence to clothing and bedding, from where, after drying, the organisms become air-borne following bed movements. A comparable sequence of events probably occurs during the dressing of staphylococcal lesions and involves the nursing or medical attendant in the spread of the organism. Once the organisms be-

come air-borne the nasal carrier state becomes inevitable among patients, nursing, and medical personnel. Within three weeks of the introduction of the antibiotic to a ward, erythromycin-resistant staphylococci were recovered from 55 per cent of the nasal swabs taken from patients and nursing staff.

While energetic and time-consuming measures aimed at containing the sources of such air-borne infection are almost routine in hospitals, little attempt has been made to supplement these measures by attempting to kill the organisms in transit in the air. With this object in view it was decided to try the bactericidal effect of a hexylresorcinol aerosol in a hospital ward. The effectiveness of this form of air disinfection has been demonstrated by several groups using a variety of organisms; some also demonstrated the viricidal effect of the aerosol, using vaccinia

virus. The object of this trial was to test the bactericidal effect of the hexylresorcinol continuous flow aerosol in a ward under normal working conditions and to determine the effectiveness of the aerosol on the staphylococcal milieu of the ward.

Material and Methods

Air bacterial counts, using nutrient agar plates, were made by means of a Bourdillon slit sampler, the results being expressed as so many organisms per cubic foot of air. Sodium chloride agar (8 per cent) and Mac-Conkey's medium were used initially to differentiate staphylococci and *B. coli* respectively, but their use was discontinued. Counts were made after 18 hours incubation aerobically at 37°C. Anaerobic culture was not undertaken.

Differential counts were made by gram staining each colony on a given plate, identifying by subculture where necessary. All staphylococci were tested for coagulase activity and the sensitivity of coagulase positive strains to the routine antibiotics was determined by means of Bacto (Difco) sensitivity discs.

Broth-moistened swabs were used for nasal and dust swabbing to ensure a representative yield of organisms. After a few hours' culture in broth the swabs were

subcultured on nutrient agar plates incubated at 37°C. for 18 hours, and staphylococcal colonies were tested for coagulase activity. Positive strains were tested for antibiotic sensitivity.

The same technical staff undertook the entire investigation and wore caps, masks, and gowns. All unnecessary movement or speech was avoided during the taking of air samples. It had been found that any vigorous movement resulted in high air counts. A pilot study in a twin ward had already been undertaken and many pitfalls in technique were avoided during the actual trial.

To ensure that the hexylresorcinol "fall-out" would not inhibit the growth of organisms on the culture media the following check was made: Four-inch nutrient agar plates were exposed on the ground underneath an Aerovap for varying lengths of time, and were then incubated for 18 hours at 37°C. and the number of colonies estimated. A positive control plate on which the Standard Oxford Staphylococcus was inoculated was exposed at the same time *au pair*. The following are the results:

EXPOSURE TIME	COLONY COUNT
60 minutes	32 colonies
30 minutes	18 colonies
15 minutes	10 colonies
10 minutes	7 colonies
5 minutes	5 colonies

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The positive control grew in each case. It was clear that the amount of hexylresorcinol in the air did not inhibit the growth of organisms of the test plates.

Pre-Aerosol Control Studies

A bacterial air count was made at each end of the central corridor and in each adjoining cubicle and room. The early afternoon was chosen for the air count as at this time the ward was least disturbed by nursing or medical activity. Counts were not done on visiting days. This time was adhered to during the trial so as to give uniformity of results. Occasionally very high air bacterial counts were encountered and in each case some unusual cubicle activity had preceded the sampling, e.g., the admission of a new patient or the changing or feeding or medical examination of an infant. Inquiries were made routinely at sampling as to the activity or otherwise of the cubicle.

A differential count was performed on a corridor sample of air with the following results: 48 organisms per cubic foot, 36 organisms (70 per cent) were staphylococci, seven organisms (18 per cent) were gram-negative bacilli, and five organisms (13 per cent) were gram-negative diplococci. Half of the staphylococci were coagulase-

positive (*Staph. pyogenes*) and therefore potential pathogens.

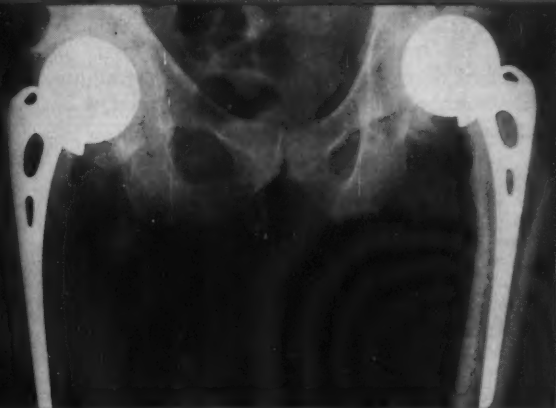
Eleven strains of *Staph. pyogenes* were tested for antibiotic sensitivity. Seven strains were sensitive to Penicillin, Streptomycin, Tetracycline, Chloramphenicol, Sulphfurazole, Erythromycin, Novobiocin. One strain was resistant to Penicillin, Tetracycline, Streptomycin, Sulphfurazole and Erythromycin. One strain was resistant to Penicillin, Tetracycline, Sulphonamide and Erythromycin. One strain was resistant to Penicillin and Novobiocin. One strain was resistant to Streptomycin and Sulphonamide.

Other differential counts from cubicles and from other wards gave almost identical results. In every count, over 30 per cent of the air bacteria were *Staph. pyogenes* with antibiotic resistance similar to those above.

The floors of all cubicles and rooms and both ends of the central corridor were swabbed and any *Staph. pyogenes* isolated were tested for antibiotic sensitivity.

By an oversight the nursing staff was not swabbed before the trial was started. The staff was, however, swabbed at the end of the test period. In a pilot study in a twin ward, pre- and post-trial nasal swabbing was done, and after six weeks' exposure to

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the hexylresorcinol aerosol there was no change in the incidence of staphylococcal nasal carriers or in the antibiotic resistance of *Staph. pyogenes* isolated.

Results

About 30 per cent of air-borne aerobic bacteria are pathogenic staphylococci with antibiotic resistance patterns similar to those of organisms isolated from infected patients. Hexylresorcinol aerosol does significantly reduce the number of air-borne organisms in a ward, but failure of

adequate penetration into closed cubicles from a central corridor diminishes the effectiveness of the aerosol in such constructed wards. The aerosol does significantly reduce the number of dust staphylococcus *pyogenes*.

The hexylresorcinol aerosol has no effect on nasal carriers due, presumably, to the protection of the organisms by nasal mucus. No toxic effects on patients or staff were noted throughout the course of the trial. ◀

Irish J.M. Sc., 421:31-37, 1961.

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Pseudoxanthoma Elasticum (PXE)

ROBERT G. TOWNLEY, M.D., and
CHARLES J. VLACH, Omaha, Nebraska

► *In patients with this hereditary disease, skin is lax, redundant, and inelastic. Hemorrhages constitute the major medical problem in most cases, and occur because of arterial changes which accompany PXE. Angioid streaks occur in 80 per cent of patients. There is no specific therapy for this condition.* ◀

This unusual hereditary disorder of connective tissue is characterized by:

1. Skin changes consisting of thickening, grooving, and formation of yellowish, diamond-shaped rectangular nodules occurring especially in areas of wear and tear.

2. Angioid streaks in the ocular fundi which produce proliferative changes, and sometimes hemorrhage which may progress to near blindness.

3. Degeneration of elastic tissue in the media of arteries with secondary deposition of calcium, resulting in pulse changes, symptoms of arterial insufficiency and coronary insufficiency.

4. Hemorrhage in different areas, notably in the gastrointestinal tract.

5. Hypertension.

Typical Findings

Prior to 1940, 125 cases having associated changes in the skin and fundus and 68 cases having skin changes alone had been described. PXE is one of the many diseases in which knowledge of the skin changes aids in interpreting systemic symptoms. The ease and safety of a skin biopsy make this a valuable procedure in confirmation. The involved skin becomes lax, redundant, and inelastic. In women the thickened, lax, yellow skin may require plastic surgery. In some cases extensive calcification of the subcutaneous tissues occurs. Rod-like structures resembling fragmented bundles of collagen, but with the staining property of elastic fibers, are seen in the corium. Seemingly both elastic

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and collagen fibers must be involved. The clinical behavior is that of a hereditary defect of connective tissue.

Weakness or absence of pulses in the extremities is a frequent finding. Intermittent claudication appearing in the third decade or earlier should suggest PXE. Calcification, intermittent claudication, loss of peripheral pulses, and melena have been seen in a case in a child aged nine. A brother, aged 25, had similar symptoms.

Hypertension may result from vascular disease in the renal vessels; this with the bleeding tendency makes cerebral hemorrhage more likely. Hemorrhages constitute the major medical problem in most cases that come to the attention of the internist. Hemorrhage may occur from a peptic ulcer or hiatal hernia, although in most cases of PXE the source of bleeding is not evident on clinical study. Certainly patients with peptic ulcer would be more likely to bleed because of the arterial change in PXE. Skin changes should be sought in any patient with gastrointestinal hemorrhage of undetermined cause. Although subarachnoid and gastrointestinal hemorrhage occur most frequently and are the most common causes of death, retinal, renal, uterine,

bladder, and nasal hemorrhage have been reported.

Case Report

A Negro man of 73 was admitted because of burning pain in the epigastrium proven to be due to an active duodenal ulcer. He showed symptoms and signs suggestive of pseudoxanthoma elasticum (loose skin) for 40 years; loss of left foot and leg by amputation because of arteriosclerotic gangrene of the foot; chest pang on exertion, relieved by rest; dyspnea on mild exertion; absence of radial, popliteal, dorsalis pedis, and posterior tibial pulses (in intact leg); thickened, leathery skin of yellowish tint over a large part of the body; lax, redundant, inelastic skin; many small masses deep in the skin felt as it was rolled between the fingers; yellowish plaques in the oral mucosa; lethargy and poor memory for past events; reduced vision, but not because of the typical angiod streaking of the ocular fundus; electrocardiographic evidence of localized ischemia of cardiac muscle; and x-ray evidence of calcification of the femoral arteries. Microscopic evidence from biopsy of the skin supported the diagnosis of pseudoxanthoma elasticum.

The involvement of the skin in this patient was some 60 per cent of total body surface—more extensive than is described in any previous report. The marked xanthomatous discoloration of the buccal mucosa and inner aspect of the lips is a common manifestation. At none of the many previous hospital admissions, including that for a leg amputation, was the skin involvement alluded to.

Although this patient is at an age group in which arteriosclerosis is to be expected, the extensiveness of the vascular involvement was unusual. In addition to having no peripheral pulses, angina pectoris and mental changes

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consistent with cerebral arteriosclerosis were clinically evident.

Angioid streaks have occurred in about 80 per cent of patients with PXE. Although this patient did not have these streaks he did have macular degeneration with a central chorioretinitis—

changes not as specific as angioid streaks but which occur not infrequently in pseudoxanthoma elasticum.

There is no specific therapy for this condition. ◀

Nebraska M.J., 46:95-98, 1961.

Radiation Therapy for Carcinoma of Cervix

A complete course of treatment for cervical carcinoma consists of intracavity radium and external x-ray therapy (administered concurrently) over a period of about a month. The unit of radium treatment is the 50 mg. tube, over-all dimensions 19 by 4 mm. The wall of the radium tube is platinum 1 mm. thick, which is sufficient to filter out all of the alpha and beta rays, thus permitting only the therapeutically useful high-energy gamma rays to emerge.

Radium treatments are given usually twice weekly, the patient hospitalized for a single day for each treatment; between treatments she is ambulatory. X-ray therapy is administered daily except Sunday, usually on an outpatient basis. The knee-chest position is used for all radium applications because it affords excellent exposure and permits best packing of the vagina to keep the radium in exact position.

External radiation is by means of 250 kvp. (kilovolt peak) apparatus, or by means of cobalt teletherapy to 2 anterior and 2 posterior pelvic ports with a 4 cm. midline protection between adjacent areas. If 250 kvp x-ray apparatus is used, treatments of 200 r as measured in air are administered daily to 2 ports until a total dose of 2000 to 2400 r to each of the 4 ports is reached. If cobalt teletherapy is employed, similar daily treatments are given, the total dose being 3500 r bilaterally.

Of 1143 patients treated by radiation for cancer of the cervix, 97% were traced for at least 5 years, 93% for 10 years. The 5-year survival rate is 49.1% of all traced patients; the 10-year survival rate is 39.6%. If all untraced patients were considered dead of cancer, the survival rate would be 47.4% for 5 years, 36.8% for 10 years.

Van Herik, M., *Proc. Staff Meet. Mayo Clin.*, 35:518-522, 1960.

Viral Infection and Disease

Viruses are the smallest and most simply constituted biologic units that manifest the essential features of living-matter. Many are composed only of an outer coat of protein and an inner core of nucleic acid. The intact virus particle does not enter the host cell; only the nucleic acid core (the chromosome of the virus) enters the cell. When separated from host cells, the particles are biochemically inert in the sense that they do not respire, metabolize, or multiply.

Modern chemotherapeutic agents do not reduce the incidence of viral diseases, do not modify their course, and do not diminish the mortality they cause. Immune sera or antibodies against viruses provide no clearly beneficial effect once a viral disease has become clinically manifest. The cell damage that is the primary basis for viral disease depends on reproduction of the agent. Most viral multiplication occurs during the incubation period when presence of infection is commonly not suspected. Signs and symptoms indicative of disease do not emerge until abnormalities have developed in a large number of

infected cells. If it were possible to modify or reverse the abnormalities that are produced in infected cells when viral reproduction occurs, means might be developed for the effective management of viral diseases. Lack of a clear concept of the biochemical basis for the damage has forced the approaches to be empirical. Several compounds have been discovered that are potent inhibitors of animal virus reproduction, their mode of action being the inhibitor of the synthesis of nucleic acid or of protein. As anticipated, none of these is free of toxic effects on host cells. Even if nontoxic inhibitor compounds can be found, there is reason to question how effective they would be when given after manifest disease has developed.

Horsfall, F. L., Jr., *Proc. Staff Meet. Mayo Clin.*, 35:269-282, 1960.

Premenstrual Tension

Therapeutic trials of 4 drugs and a placebo were made in 30 women who had complained of premenstrual tension without change for at least 6 months. Average age was 28.1 years and average duration of symptoms was 5 $\frac{1}{4}$ years. Symptoms in-

cluded irritability in 24 patients, depression in 23, headache in 15, listlessness in 5, vertigo in 3, and nausea in 1. Each patient took each medication for 3 months, starting 9 days before the expected day of each period and continuing until menstruation started. Daily dosage was 1.0 gm. for chlorothiazide, 1.2 gm. for meprobamate, 50 mg. for ethisterone, 15 mg. for dimethisterone, and 2 tablets for the placebo.

Meprobamate was the most effective, giving total or marked relief to 16 patients as compared to 10 similarly relieved by chlorothiazide and only 3 by each of the progesterone derivatives. Few patients responded well to more than 1 agent, 11 deriving total or marked relief from meprobamate but not from chlorothiazide, 5 from chlorothiazide but not from meprobamate, and only 5 from both drugs. Of the 9 not benefited by either of these, only 2 showed marked improvement with either of the progesterone derivatives. Chlorothiazide seemed to bring on the next menstruation sooner than anticipated in 6 patients and caused frequency in 1 and increased libido in another. No untoward effects were noted with meprobamate.

From a practitioner's point of view the only object is relief of symptoms. Organic disease must

be excluded and then an attempt made to provide symptomatic relief. It seems reasonable to start treatment with meprobamate, and if this is ineffective to give chlorothiazide, progesterone, or a combination.

Appleby, B. P., *Brit. M.J.*, 1:391-393, 1960.

Ulcerative Colitis: Conservative Treatment

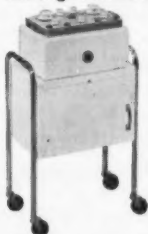
Cancer often develops in patients who have had ulcerative colitis since their youth and it is usually so insidious in onset that diagnosis is virtually impossible until widespread and incurable metastases have taken place. Among 140 cases observed over a 7 year period, the complication arose in 10, an incidence of 7%. Of these, only 1 survives and with 2 exceptions all who died were in early adult life. Medical treatment of ulcerative colitis should always be given a fair trial, but if symptoms persist after 2 or 3 years, operation should be undertaken to cure residual ill health and to prevent cancer. Total colectomy and ileorectal anastomosis are the procedures of choice, with the disease in the remaining rectum resolving after the ulcerated colon has been excised. Operative mortality is approximately 1%, which is slight in comparison with the risk of cancer.

Aylett, S., *Brit. M.J.*, 1:876, 1960.

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Infant Formulas Evaluated in Terms of Expendable Renal Water

In estimating water needs of the infant for renal excretion, protein and electrolyte contents of the diet must be considered, carbohydrate and fat not contributing to the osmolar load excreted in the urine. The urine volume of full-term infants aged 2 to 4 days fed whole cow's milk, low osmolar milk (Similac), modified cow's milk, or human milk (colostrum) ad libitum and kept in an environment of 70° to 80° F. measured about 25% of the fluid intake. The largest amount of expendable water (82%) was found in infants fed low osmolar milk, the smallest amount (57%) being in those fed whole cow's milk. The urine volume of full-term infants aged 6 to 9 days fed transitional human milk ad libitum measured about 45% of the fluid intake, 82% of this being expendable renal water. The urine volume of premature infants aged 10 to 20 days and weighing 1.4 to 2.1 kg. fed low osmolar milk measured 52% of the fluid intake, 86% of this being expendable renal water, whereas that of premature infants aged 28 to 56 days and weighing 1.6 to 2.1 kg. fed whole cow's milk measured 44% of the fluid intake, only 45% of this being expendable renal water.

It was concluded that:

1. Full-term newborn and older premature infants (assuming renal concentrating capacity to be 700 mOsm. per liter) can excrete the renal solutes derived from formulas commonly offered without requiring additional fluid intake or drawing upon stores of body water.

2. Because its margin of safety might be greatly reduced under adverse circumstances, undiluted cow's milk is not recommended at this age period.

Calcagno, P. L., & Rubin, M. I., *J. Pediatrics*, 56:717-727, 1960.

Relative Potency of Progestogens

Postponement of menstruation in normal women given a drug for 20 days (from the 20th day of the cycle) was used to provide data on which statistical evaluation of potency ratios of progestogens was made. ED₅₀ for norethisterone was 4.25 mg., norethisterone acetate 10.25 mg., norethynodrel plus ethynyles-tradiol-3-methyl ether 5 mg., and dimethisterone more than 80 mg. Withdrawal bleeding and vaginal smear changes in women with secondary amenorrhea do not provide suitable criteria for the comparison of progestational activity.

Swyer, G. I. M., et al., *Proc. Roy. Soc. Med.*, 53:435-436, 1960.

Primary Malignancy of Chest Wall

Of 8 patients with these lesions, 3 are dead. One patient with malignant plasmacytoma of the sternum died more than 4 years after radical excision of the sternum and chest wall. A second expired approximately one year after resection of the chest wall for an osteolytic osteogenic sarcoma. Cause of death was probably a ruptured aortic aneurysm, although autopsy was not obtained. A third patient committed suicide 3 weeks after exploration. Of 5 patients who are living, 3 were diagnosed as having fibrosarcoma of the chest wall, one malignant ganglioneuroma, and one osteochondrosarcoma.

All primary malignancies of the chest wall should be considered resectable if early and adequate approach to these lesions is performed. The thoracotomy approach, entering the pleural space an adequate distance from the primary malignancy, is mandatory. Frozen sections are indicated to determine the nature of the lesion, a radical resection around the entire involved area then being accomplished. The defect should be closed with tantalum mesh sheet, cutting this

slightly larger than the defect and suturing it securely over the defect on the external surface of the ribs. In 5 patients treated in this manner, there has been no migration of the prosthesis nor has there been any infection. After the fibrous tissue seals the area, the chests are stable and firm.

Polk, J. W., et al., *Missouri Med.*, 58:217-222, 1961

Cardiac Arrest: Transfusion as Major Cause

Potassium intoxication induced by rapid infusion of large quantities of bank blood was the cause of cardiac arrest in 50 patients, the average dose of potassium being 77.7 mEq. The concentration of extracellular potassium is high in banked blood, increasing with time and being especially high in cold blood. During hemorrhagic hypotension, potassium is released from all tissues, the greatest amount being released from the liver. Rapid transfusion combined with this endogenous increase may thus lead to cardiac arrest before hyperkalemia is detectable by venipuncture.

The following preventive measures are recommended:

briefs: surgery

1. Proper monitoring of blood loss to prevent hypovolemia.

2. Use of fresh blood, or blood treated with ion-exchange resins, when large quantities of blood must be transfused.

3. Digitalization when large transfusions are needed.

4. Recognition of a rise in venous pressure as a clue to impending potassium intoxication.

5. Use of isopropylarterenol (Isuprel), rather than epinephrine, as a cardiac stimulant.

LeVeen, H. H., et al., *J.A.M.A.*, 173:770-777, 1960.

Preanesthetic Medication Without Narcotics

Preanesthetic medicaments are administered to relieve apprehension, to supplement the anesthetic, to relieve pain, and to control vomiting. With the advent of more potent anesthetic agents, it was soon realized that heavy medication before operation was neither desirable nor necessary. A system was initiated which used promethazine with a sympathomimetic agent, preferably scopolamine. It was determined that 25 to 35 mg. of promethazine, with 0.4 to 0.6 mg. of scopolamine (or atropine, in the presence of cerebral depression) by intramuscular injection, constituted the optimum dose. Small children received the dose in suppository form; for infants

less than 2 years, the amount was halved. Morphine, 5 to 10 mg., was added only if the patient was experiencing pain. This dosage was used for practically all patients, regardless of age, preanesthetic status, surgical risk, or operative procedure. To achieve optimum effect it was necessary to administer the injection at least 90 minutes prior to induction. After having become profound in this length of time, sedation continued for about 3 hours.

Quiescence was considered adequate if the patient was drowsy on arrival on the operating floor and, if undisturbed, remained disinterested in his environment, exhibited no symptoms of cardiovascular depression, either before or during induction, and showed no excess of salivary secretions.

In 85% of 5500 unselected patients (on whom all types of anesthetic techniques were used), preanesthetic sedation was adequate. The remaining 15% showed somewhat more awareness in the operating suite. None was frankly restless or apprehensive or required supplementary barbiturates. After recovering consciousness, 60% of the patients were unable to recall arrival in the operating room or preparations for induction.

Wallace, G., *J.A.M.A.*, 173:797-799, 1960.

Thyroid Function: Two-Hour Radioiodine Test

A comparison of results in 130 hyperthyroid patients showed that 69 per cent had 24-hour I^{131} uptake in the hyperthyroid range (over 45 per cent), while 97 per cent had 2-hour uptake in the hyperthyroid range (22 per cent). Technique for the 2-hour test was as follows: 25 μ c. of I^{131} made up to 25 cc. of tap water is given orally. Before administration, the tracer dose is measured accurately in a wax phantom at 30 cm. After the patient drinks the tracer dose, the empty cap is counted after 2 washings which the patient also drinks. The net count is obtained by subtracting the "empty" cup count from the original count of the 25 μ c. Two hours later, thyroid uptake is determined with the scintillation counter which has a 1-inch crystal shielded by 1 cm. of lead throughout its entire length and 2 cm. of lead at its tapered end which has a 1 cm. opening. Examination is performed with the patient fasting to insure prompt absorption of the test dose.

The uptake of I^{131} at 24 hours is less accurate as a test for thy-

roid function because after the tracer dose is given, it is converted to thyroxin in the thyroid gland. However, not all the tagged thyroxin is retained in the gland and some is discharged into the circulation. By 24 hours, in hyperthyroidism, a significant proportion of the radioactivity has been discharged from the thyroid gland and the uptake has descended into the euthyroid range.

Sklaroff, D. M., *Pennsylvania M.J.*, 64:200-201, 1961

Perforation of Stomach in Newborn

Roentgenograms of the abdomen should be taken immediately in any infant who suddenly develops abdominal distention. Perforation of a hollow viscus should be suspected in the presence of cellulitis and edema of the anterior abdominal wall, umbilical area, or genitalia. Treatment consists of immediate operation for closure of the perforation. Any gastric contents free in the peritoneal cavity should be removed and the peritoneal cavity irrigated with saline solution containing a million units of penicillin and a gram of streptomycin.

Lipton, M., & Bradham, R. R., *J. South Carolina M.A.*, 57:102-106, 1961

● THERAPEUTIC INDEX

"Thiosulfil" Forte 0.5 Gm. Tablet

BRAND OF SULFAMETHIZOLE

"THIOSULFIL" has been found effective against the following urinary pathogens: *Proteus vulgaris*, *Pseudomonas aeruginosa*, *Escherichia coli*, *Streptococcus fecalis*, *Escherichia intermedium*, and *Aerobacter aerogenes*. In individual cases, sensitivity of the organisms may vary. Sensitivity tests, preferably by the tube dilution method, should be done first, for guidance as to alternate therapy in case "THIOSULFIL" FORTE does not control the infection.

INDICATIONS: Treatment of cystitis, urethritis, pyelitis, pyelonephritis, and prostatitis due to bacterial infection amenable to sulfonamide therapy; prior to and following genitourinary surgery and instrumentation; prophylactically, in patients with indwelling catheters, ureterostomies, urinary stasis, and cord bladders.

SUGGESTED RANGE OF DOSAGE: Adults: 1 or 2 tablets (0.5 Gm.-1.0 Gm.) three or four times daily.

WARNING: Due to the high solubility in body fluids of "THIOSULFIL" and its acetyl form, the hazards of renal tubule obstruction are minimized. The usual precautions exercised with sulfa drugs generally should, however, be observed. In those rare instances where exanthemata, urticaria, nausea, emesis, fever or hematuria, are encountered, administration should be discontinued.

CONTRAINDICATION: A history of sulfonamide sensitivity.

SUPPLIED: NO. 786 — "THIOSULFIL" FORTE — Each tablet contains sulfamethizole 0.5 Gm. (scored), in bottles of 100 and 1,000.

ALSO AVAILABLE — NO. 785: "THIOSULFIL" — Each tablet contains sulfamethizole 0.25 Gm. (scored), in bottles of 100 and 1,000. No. 914—"THIOSULFIL" Suspension — Each 5 cc. (teaspoonful) contains sulfamethizole 0.25 Gm., in bottles of 4 and 16 fluidounces.

SUGGESTED DOSAGES: Infants and children: The dosage is scheduled on an average basis of $\frac{1}{2}$ to $\frac{1}{4}$ gr. (30 to 45 mg.) per pound of body weight per day in divided doses. Maximum dosage up to 50 lbs., $\frac{1}{2}$ teaspoonful q.i.d. Maximum dosage from 50 to 75 lbs., 1 teaspoonful q.i.d.

WHEN ANALGESIA IS DESIRED

"THIOSULFIL"—A FORTE NO. 783:

Each tablet contains sulfamethizole 0.5 Gm., and phenylazo-diamino-pyridine HCl 50.0 mg., in bottles of 100 and 1,000.

CONTRAINDICATIONS: (1) a history of sulfonamide sensitivity and (2) due to the phenylazo-diamino-pyridine HCl component, renal and hepatic failure, glomerulonephritis, and pyelonephritis of pregnancy with gastrointestinal disturbances.

USUAL DOSAGE: Adults: 2 tablets, four times daily. **Children 9 to 12 years:** 1 tablet, four times daily.

ALSO AVAILABLE: NO. 784 "THIOSULFIL"—A —Each tablet contains sulfamethizole 0.25 Gm., and phenylazo-diamino-pyridine HCl 50.0 mg., in bottles of 100 and 1,000. **USUAL DOSAGE: Adults:** 2 tablets, four times daily. **Children (9 to 12 years):** 1 tablet, four times daily.

For references, see opposite page.

SAFELY MANAGES ALL EPISODES OF URINARY TRACT INFECTION

"Thiosulfil"® Forte 0.5 Gm. Tablet

(BRAND OF SULFAMETHIZOLE)

THE ONE SULFONAMIDE THAT OFFERS

- Maximum urinary concentration of active, free sulfa at site of infection
- Rapid clearance (noncumulative)
- Rare incidence of side effects
- High degree of clinical effectiveness

"Thiosulfil" dosage schedules reported in the literature.

INITIAL EPISODE (Acute Infection) 3 Gm./day¹

Based on 7 years' clinical experience in treating 3,057 cases of upper and lower urinary tract infection, Bourque¹ found 3 Gm./day for 2 weeks (the average dosage employed in 97 per cent of patients) effective in most cases.

RECURRING EPISODE (Flare-up) 3 Gm./day¹

Same dosage as above. When longer therapy is required as in cases where there is stasis due to obstruction, administration may be continued at a lower dosage range.

CONTINUING EPISODE (Stasis/Obstruction) 2 Gm./day^{2,3} 0.5 Gm./day⁴

Where infection remains latent due to causes which cannot be eliminated as in paraplegia, patients have been maintained symptom-free on dosage regimens ranging from 2 Gm. to 0.5 Gm./day. After initial control of acute symptoms, therapy may be continued indefinitely on a low dosage basis to guard against recurrence and prevent ascending infection. Many cases can be controlled with as little as 0.5 Gm./day.

SUPPLIED: No. 786—"Thiosulfil" Forte—Each tablet contains sulfamethizole 0.5 Gm. (scored), in bottles of 100 and 1,000.

ALSO AVAILABLE—In urinary tract infection—to alleviate pain and control the infection: No. 783—"THIOSULFIL"®-A FORTE combines the sulfonamide specific for urinary tract infection with a potent analgesic for prompt, soothing relief of local discomfort. Each tablet contains sulfamethizole 0.5 Gm. and phenylazodiamino-pyridine HCl 50 mg., in bottles of 100 and 1,000 tablets.

References: 1. Bourque, J.-P., and Gauthier, G.-E.: L'Union Medicale 89:640 (May) 1980. 2. Cottrell, T. L. C., Rolnick, D., and Lloyd, F. A.: Rocky Mountain M. J. 88:98 (Mar.) 1959. 3. Bourque, J.-P., and Joyal, J.: Canad. M.A.J. 98:337 (Apr.) 1953. 4. Hughes, J., Coppridge, W. M., and Roberts, L. C.: North Carolina M. J. 17:320 (July) 1956.



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C124

Diagnosis In Burns

The commonest failure in the management of burns is the incorrect diagnosis of one or other aspects of the problem found in the burned patient. Patients with extensive burns are being kept alive as the result of correct early diagnosis of shock, permitting early and effective treatment.

When the patient survives the early period of shock and the burn passes into the stage of sloughing and repair, many new problems require diagnosis and treatment. It is at this time that errors in diagnosis are most often made. Our larger medical centres are receiving many burned patients who have been referred much later than is desirable because of an original error in the diagnosis of the depth of the burn. While this diagnosis is often difficult, it must be realized that no changes will occur in the burned area in the first 10 days which will make the diagnosis any easier. There is no justification for treating the burn for days or weeks while the patient becomes debilitated and the burned area infected, only to realize that the area is not healing and that skin grafting is required. The problem is then difficult indeed.

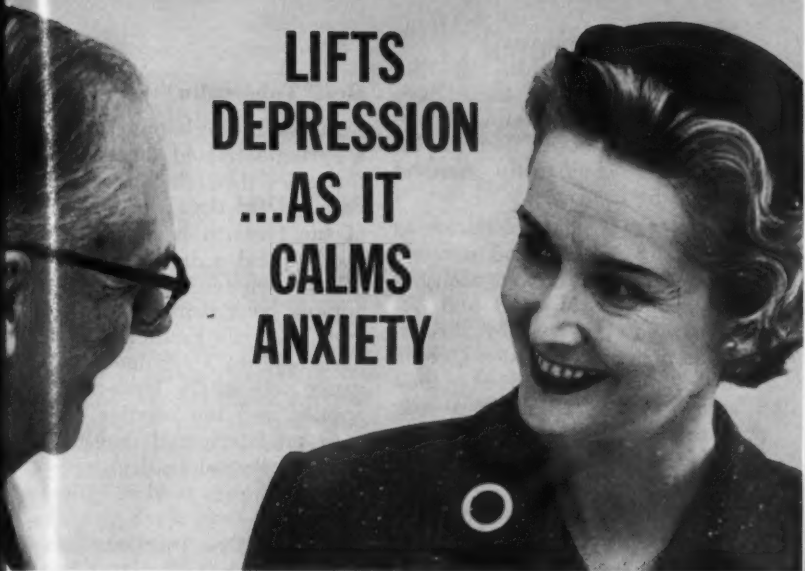
If a burned patient is to be

transferred for surgical treatment, it should be done between the fourth and the tenth day. The necessity for this transfer will be dictated by the diagnosis made of the depth of the burn at the time of the first treatment. The total mortality of burned patients has changed little in the past 25 years, although we now have techniques available which greatly decrease morbidity and ultimate disability. If we cannot diagnose the depth of the burn in the early stages, we must consider it to be deep and treat the patient accordingly. To fail in this is to deny the patient the benefits of advances that have been made, and to perform less than our duty.

Editorials and Comments, *Canad. M.A.J.*, 82: 156, 1960.

Oral Cholangiogram

With the oral cholangiographic technique, adequate examinations may be obtained in a large percentage of patients. The method has been successful in demonstrating the gallbladder and/or the biliary tree in cases where the usual repeat method or double-dose method has failed. There is also less risk of serious reaction than with the intravenous method, and although some patients have experienced gas-



LIFTS DEPRESSION ...AS IT CALMS ANXIETY

"I feel like my old self again!" Thanks to your balanced Deprol therapy, her depression has lifted and her mood has brightened up — while her anxiety and tension have been calmed down. She sleeps better, eats better, and normal drive and interest have replaced her emotional fatigue.

Brightens up the mood, brings down tension

Balanced action — avoids "seesaw" effects of energizers and amphetamines.

Acts rapidly — you see improvement in a few days.

Acts safely — no danger of liver or blood damage.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.

Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.

▲ Deprol ▲



WALLACE LABORATORIES / Cranbury, N. J.

briefs: diagnosis

trointestinal upsets, these have not been life-threatening. If the oral technique fails, then the intravenous cholografin method should be used.

The oral is not as accurate as the intravenous method in determining the functional capacity of the sphincter of Oddi and obstruction at this level by fibrosis. Some patients have been given a fatty meal, then re-examined with the finding that there was almost complete emptying of the biliary tree in some and only a partial emptying in others.

One patient showed marked change in the biliary tree with change in the biliary radicals, as well as at least one nonopaque calculus within the lumen of the common duct at the level of the ampulla, and failure of the gall-bladder to visualize. By all criteria there should have been pathologic change of the sphincter of Oddi; yet on re-examination of this patient after a fatty meal, the biliary tract was almost empty of contrast medium. This patient refused surgery; we were denied further follow-up study — the only possible ways of determining the functional capacity of this sphincter when using the oral technique. The accuracy of interpretation will have to be correlated with operative findings in many cases.

Gearing, F. W., Jr., & Canter, N. M., Jr., *Virginia M. Month.*, 87:186-192, 1960.

Heaf Tuberculin Test

In this multiple-puncture test, a spring-activated lancet drives 6 needles through a drop of tuberculin on the skin. The skin of the forearm is cleaned with acetone and a drop of a special P.P.D. tuberculin (2 mg./ml.) is applied by a flamed inoculating loop, a sterile toothpick, or (in mass testing) a syringe with 25-gauge needle. The lancet is then applied and the needles driven to a predetermined depth. The area is allowed to dry, without dressing, and is read at 72 hours or later.

The positive reactions range from 4 or more discrete papules to an area of induration over 10 mm. in diameter. The test can be given to 100 or more subjects per hour after personnel have been given a brief period of training. It causes no pain, few severe local reactions, and no constitutional symptoms.

This test, applied to 61,000 pupils entering high school in 1958, proved acceptable to students and staff and more dependable than the Vollmer patch test. Comparative studies with the Mantoux test in a variety of groups showed the Heaf test to be highly specific, with a sensitivity level between that of intermediate- and full-strength tuberculin intradermal tests.

Robins, A. B., & Daly, J. N., *New England J. Med.*, 262:1008-1012, 1960.

Doctors and the Law

CHARLES J. FRANKEL, M.D., LL.B., *Editor*

►Can a doctor who, upon the request of a patient's employer, but against the patient's wishes, informed the employer that the underlying cause of the patient's absences from work was alcoholism, be found guilty of malpractice if the doctor had previously, at the patient's request or with his permission, made incomplete disclosures to the employer as to the nature of the patient's illness?◄

This question was before the Supreme Court of Kings County, New York, in *Clark vs Geraci*, 208 N.Y.S. (2d) 564 (1960). The defendant doctor had, for considerable period of time, treated the plaintiff, a civilian employee of the U.S. Air Force, for asthmatic bronchitis and respiratory infections and had sent medical certificates to the Air Force stating that the plaintiff's repeated absences from work were due to these ailments. In the course of treating plaintiff, the defendant had learned that the plaintiff had taken to drink as a means of meeting his social problems and concluded that the asthmatic bronchitis and res-

piratory infections were the ill effects of the plaintiff's alcoholism. The Air Force requested a letter from the defendant stating the underlying cause of the plaintiff's illness since this information had not been contained in the medical certificates previously issued by him. After telling plaintiff of this request, the defendant sent the Air Force a letter stating that the underlying cause of the plaintiff's absences was alcoholism. Shortly thereafter, the Air Force discharged the plaintiff.

The plaintiff contended that the defendant's sending of the letter constituted malpractice because he thereby divulged a confidential communication. The Court pointed out that a doctor's divulging of a patient's confidential communication is, by statute, declared to be unprofessional conduct and that, by another statute, a doctor is prohibited from testifying to such communications when called as a witness. Although, according to Wigmore,

disclosure violates no principle of common law, it is plainly reprehensible as indicated by the state statutes, accepted usage and the Hippocratic oath. Some states have held that disclosure by a doctor of a confidential communication may be actionable. The Court said that such disclosure should be recognized as actionable in this state because the duty of secrecy is implied by its statutes and widely conceived in the doctor-patient relationship.

The defendant contended he should not be held liable because he had an overriding duty to disclose underlying cause of the plaintiff's absences when requested to do so by a military unit of the government, especially since he had previously supplied incomplete information. Did the defendant have a duty to divulge his patient's weakness which could conceivably aid the government to rid itself of a worthless employee thereby saving public funds that was greater than his duty of maintaining a confidential professional communication? If the disclosure had been necessary to guard the government's security or the public's safety, as in a case of disclosing a communicable disease, it would be simple, said the Court, to find that defendant's duty to disclose overrode his duty to remain silent. The Court said that, because

of the prior incomplete medical certificates supplied by the defendant at the plaintiff's request, the defendant's right, if not his duty to his government, to make a full disclosure superseded his duty to his patient to remain silent.

There is the further fact that the defendant had, at plaintiff's request, issued certificates stating the fact that he suffered from bronchial and respiratory difficulties. These requested certificates constituted a waiver of the plaintiff's privilege at least as to the described ailments. Assuming that the plaintiff requested defendant not to send the Air Force the letter, the question is whether plaintiff's waiver could be limited or terminated so as to prohibit disclosure of true nature of his ailments. The Court said that, since the plaintiff had placed the defendant in the position of telling only part of the truth, he was estopped from preventing his divulging the remainder. Under the circumstances there could be no limitation or termination of the waiver.

► *In an action against a hospital for alleged negligence in failing to provide adequate supervision and attendance of newborn baby, can hospital be held liable if there is expert testimony that the hospital used the highest degree of care in its nursery and that the accident could have occurred anywhere at any time?* ◀

The Florida District Court of Appeal, Third District, passed on this question in *Sprick vs North Shore Hospital, Incorporated*, 121 So. (2d) 682 (1960). Plaintiff, while a newborn baby being kept in defendant hospital's nursery, strangled on mucus and "stopped breathing" for approximately forty-five minutes with resulting physical injuries. It was contended for the plaintiff that he would not have suffered these injuries if the hospital had not negligently failed to provide adequate supervision and attendance.

The Court said that a hospital owes a patient the duty of exercising such reasonable care as his known condition may require, the degree of care being proportionate to his known physical and mental ailments. Naturally, a higher degree of care is required in attending a newborn baby than an adult. The defendant contended it could not be held liable because there was expert testimony that its nursery was maintained and supervised in accordance with the highest standards of nursery care and that the accident to plaintiff could have occurred in any hospital nursery no matter how much care and attention was exercised. The Court said that this evidence as to type of care given, in general, was not deter-

minative of central issue of fact in this case which was—How long was the child unattended? The argument that the hospital cannot be held liable because the accident was one that could have occurred anywhere at any time overlooks the fact that the hospital is not charged with the fact that the baby did strangle, but is charged with leaving him unattended for a long enough period to allow extensive damage because of the stoppage of breath.

The nurse did not know how long the plaintiff was left unattended and unobserved. She did, however, testify that the chart indicated he had been fed at six o'clock and that she noticed his blue color at seven o'clock while walking around the cribs; chart also indicated that plaintiff had cried continuously after his feeding. The plaintiff's crib was in the back row. A witness for defendant testified that a nurse sitting at the desk in the nursery could see and hear all of the infants in their cribs; a picture of the nursery was submitted in support of this testimony. The Court said the picture did not conclusively show that the babies in back row of cribs could be observed from the nurse's station. In view of all the evidence, the question of whether the plaintiff was unattended for an unreasonable and unsafe period

of time should, said the Court, have been submitted to the jury.

► *An older doctor (now deceased) entered into an agreement with a younger doctor to sell him his practice. The agreement provided that the decedent doctor would remain active in the practice, and made the price of the practice dependent upon the decedent doctor's ability to participate. The agreement did not specifically provide that the younger doctor had the right to discharge the decedent doctor and he retained title to equipment, etc., until certain payments had been made. The younger doctor did not limit the decedent doctor in his methods of treatment or medicines used. Was the decedent doctor's widow entitled to benefits under the Social Security Act on the ground that he was an employee of the younger doctor?* ◀

This question was passed on by the U.S. Court of Appeals for the Ninth Circuit in *Flemming vs Huycke*, 284 F.(2) 546 (1960). On January 31, 1955, an older doctor, who is now deceased, sold his practice to a younger doctor who had been employed by him for some time. The sale agreement provided that the younger doctor would have full business management of the office and would be the owner of all accounts receivable on all professional services rendered by either doctor after the date of the agreement. The agreement further provided that the older doc-

tor would continue to work with the younger one in furnishing medical services to patients. The agreement was to terminate on January 1, 1958, on which date all equipment, medical records, office furnishings, etc., were to be transferred to the younger doctor. The younger doctor was to pay the older doctor \$100 per month for the term of the agreement as the purchase price of the practice. He was also to pay to the older doctor, as salary for professional services, \$600 per month from February 1, 1955 to January 1, 1958 and \$500 and \$400 per month, respectively, for the next two years. The agreement further provided that, if the older doctor became unable to work before January 1, 1958, the younger doctor would pay him or his estate \$300 per month until January 1, 1958, at which time title to the equipment, furnishings, etc., would pass to the younger doctor. Following the older doctor's death in July, 1956, his widow applied for social security benefits. Referee for the Social Security Administration denied her claim on ground that her husband had not been an employee of the younger doctor.

The Referee concluded that there was no employer-employee relationship because no purchase price for the practice was set and that the parties merely in-

tended to guarantee the older doctor a minimum income without regard to services rendered. The Court said this conclusion was unreasonable. Although price was conditional, it was specific. The provision increasing the price if the older doctor became unable to work was in the nature of disability or life insurance, but salary provisions were wholly separable from this. The fact that the agreement contained this "insurance" provision cannot, said the Court, support an inference that an employment relationship was not intended.

The Court also rejected Referee's conclusion that there was no employment relationship because the agreement did not set standards as to amount of work to be done by older doctor. He was to continue working as he had before the agreement and he fulfilled that obligation. If he had not worked, he could have been discharged even though this was not specifically provided for in the agreement.

The Court concluded, contrary to the Referee's finding, that older doctor's retention of title to office equipment and furniture until certain payments were made was not inconsistent with an employment relationship. This was nothing more than the security retained by older doctor as a conditional seller.

In finding there was no employment relationship, the Referee stressed fact that the older doctor was permitted to treat patients as he saw fit and to prescribe medicines which the younger doctor might not have prescribed. The Court said that the methods by which doctors work are directed by the standards of the profession and are peculiarly unsuited to direction and close control by an employer. In view of the high confidence the younger doctor had in the older doctor and the limited control which, in general, might be exerted by an employer over an employee doctor, the younger doctor's failure to limit the methods of treatment and the medicines used by the older doctor is, said the Court, in no way indicative of the absence of an employment relationship.

► *The defendant doctor, when leaving hospital floor on which acutely mentally ill patients were housed, turned his back on the plaintiff, a patient who had a potential for suicide, for a few seconds in order to push the door closed with his shoulder. The plaintiff leaped through the door, ran down stairs to a landing and jumped through an open window. Was the defendant doctor guilty of malpractice?* ◀

The Missouri Supreme Court had this question before it in *Gregory vs Robinson*, 338 S.W. (2d) 88 (1960). The plaintiff

who suffered from severe depression and had a potential for suicide had a room on third floor of hospital. All acutely mentally ill patients were housed on this floor. Patients were allowed the freedom of the floor. The only exits were through a locked stairway door and through a locked elevator door. While at the nurses' station writing orders, the defendant was approached by the plaintiff who said he felt sufficiently improved to go home and asked permission to call his wife and have her come for him. The plaintiff seemed unhappy when defendant told him he needed further treatment and could not call his wife, but walked away without protest. Since the elevator was in use when he was ready to leave, the defendant decided to use the stairs, the doorway of which was almost directly across the hallway from the plaintiff's room. Before unlocking the door, the defendant looked to see that nobody was around and saw the plaintiff sitting on his bed. While unlocking the door, the defendant continued to watch the plaintiff. He then went quickly through the door and applied his shoulder to the door to speed its automatic closing. During these few seconds his back was to the plaintiff. Before the door was closed, plaintiff smashed

against it, knocking the defendant aside, and ran down stairs to landing where there was an open window. The plaintiff jumped through the window and suffered serious injuries.

The plaintiff contended that the defendant's momentary turning of his back to him constituted negligence. The Court said that the defendant's method of closing the door would undoubtedly close and lock it as quickly, if not more quickly, than any other. The defendant's back was to the plaintiff no more than a second or two. If he had stood and watched the plaintiff longer while at the door or talked with him again, he might have disturbed him unduly or created a desire to escape, if the plaintiff did not already have such desire. The defendant had the duty, not only to confine the plaintiff, but also to treat him, to cure him if possible, and to protect him as far as was reasonably possible consistent with his other duties. If the plaintiff's safety was the only object, he could have been put in a strait jacket or strictly confined. Allowing him the freedom of the ward was a "calculated risk," assumed in the light of modern concepts of treatment. The defendant was not negligent because he could not reasonably be required to anticipate that the plaintiff was likely to make

such a precipitous bolt for the door. To hold that negligence could fairly be inferred in this case would impose an unrealistic

duty of care and would, for all practical purposes, make defendant the insurer of the plaintiff's safety and well-being. ◀

Initial Treatment of the Alcoholic

On admission, patients with acute delirium tremens were treated as follows: After being put to bed, with restraint if necessary, up to 5 grains of sodium luminal were given. Other medication included 50 to 100 mg. of promazine HCl intravenously or intramuscularly as needed; diphenylhydantoin sodium, 3 grains immediately and $1\frac{1}{2}$ grains 3 times daily for 10 days; phenobarbital, $1\frac{1}{2}$ grains 3 times daily for 10 days; vitamins, intramuscularly at first and orally later on; 2000 cc. of 5% glucose in saline slowly immediately, repeated when necessary in the next 2 days; and cortisone or ACTH if required.

Those who were acutely intoxicated on admission were put to bed and given the following medication; diphenylhydantoin sodium, 3 grains immediately and $1\frac{1}{2}$ grains 3 times daily for 7 days; $\frac{1}{2}$ grain phenobarbital 3 times daily for 7 days; 2 cc. B-complex vitamins intramuscular-

ly daily for 5 days; 50 mg. chlorpromazine intramuscularly immediately if necessary, and 50 mg. orally 3 times daily for 10 days; and 1 multivitamin capsule 3 times daily for 2 weeks.

If the patient was sober on admission, the following regimen was followed: diphenylhydantoin sodium, 3 grains immediately and $1\frac{1}{2}$ grains 3 times daily for 7 days; $\frac{1}{2}$ grain phenobarbital 3 times daily for 7 days; 50 mg. chlorpromazine orally 3 times daily for 7 days; 2 cc. B-complex vitamins intramuscularly daily for 3 days; and 1 multivitamin capsule three times daily for 10 days.

Of 104 male patients treated, none who did not have delirium tremens when admitted ever developed this condition. Those who did have delirium tremens had such symptoms cleared within 8 hours of admission. There were no convulsions or other untoward effects.

Stratas, N. E., & Schmidt, K. T., *Virginia M. Month.*, 87:154-155, 1960.



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The Doctor Builds His Estate

*Prepared monthly for the readers of
Clinical Medicine by the Research Department of
Bache & Co., 36 Wall Street, New York 5.*

►These monthly articles point out one method by which the physician may overcome the handicap imposed upon him by taxes on the bulk of his income at normal rates, as opposed to the capital gains tax open to many business men. One solution is systematic investment of current income in securities.◄

Now that spring has finally worked itself out of the grips of an extremely hard winter, the alert investor can begin to investigate the possibilities of so-called "warm-weather" stocks. Perhaps the "warm weather" label is somewhat misleading, for the companies we have in mind are quite active all year around. However, due to the nature of their principal products, operations are generally heavier during the hotter months and full-year profits are heavily weighted on performance from spring to fall.

The companies to be discussed this month are: (1) Briggs & Stratton, primary producer of

small gasoline engines in power lawn mowers that are currently wending their way through the crab grass; (2) Pepsi-Cola, whose soft drink products naturally are stimulated by the hot, thirsty weather; (3) Greyhound Corp., who caters to the nation's warm-weather wanderlust; and (4) Distiller Corp.-Seagrams, whose products are more of the all-year-round type than the others. It is still the beneficiary of the more expansive living habits of the spring and summer.

Briggs & Stratton

Our first company for perusal is Briggs & Stratton, the world's largest manufacturer of single cylinder, four-cycle air-cooled gasoline engines, which find their major application in lawn mowers. In addition, these engines power drills, saws, garden tractors, air compressors, pumps and other products.

Over the years, Briggs & Stratton has shown significant gains in

sales and earnings. While the growth trend has been quite pronounced, changes in business conditions have, at times, temporarily affected results adversely. The year 1960 was such a period, with sales declining to \$81 million from \$89 million and net income to \$4.06 per share from \$4.95. With sales declining about 10%, the company was still able to return 9% on sales, compared to 10% in the preceding year. This performance is outstanding and can be equaled by very few industrial companies.

In fact, the maintenance of profit margins in a down year characterizes the past record of the company. Over the years, the company has been able to maintain an unusually high rate of profitability, both on its sales and on invested capital.

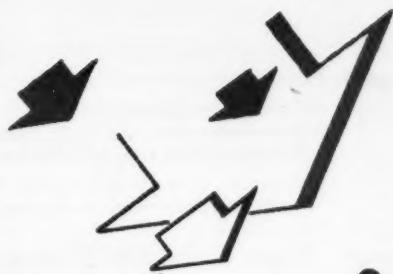
Briggs & Stratton continuously strives to reduce costs and currently again is engaged in a major cost reduction program. A new plant now being added will permit further integration to achieve even lower manufacturing costs.

As stated earlier, single-cylinder, four-cycle air-cooled gasoline engines account for the chief portion of this company's total sales. Engines are made in seven basic models, ranging up to nine horsepower and are used to power lawn mowers which provide the largest outlet for the com-

pany's engines. In 1960, about 3.8 million power mowers were sold by the industry, down about 10% from the peak 4.2 million of 1959. Industry volume rose from 1.1 million units in 1950 to 2.0 million in 1954. Since 1946, over 28 million power mowers have been sold. Other important markets include those segments of the appliance industry which require low-horsepower engines in the finished product.

A substantial amount of lock and switch business is done with Chrysler, Ford, and General Motors. The balance goes to other manufacturers of automobiles and trucks, and through parts jobber channels to many automobile dealers and independent repair shops. The company is also the principal producer in this field.

Distribution of the company's products is made direct to manufacturers in most cases and in part to jobbers, dealers, and service operations. The company maintains a broad service network throughout most parts of the United States. Two plants are operated in Milwaukee and one, opened in 1955, at Wauwatosa, a Milwaukee suburb. In 1958, the company completed a new 173,000 square-foot building at the Wauwatosa location for its service department operations and for warehousing. In 1960, the company further expanded



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BRIGGS & STRATTON

Price57¾
Dividend\$2.50
Yield4.5%
TradedN.Y.S.E.

Capitalization
Long-Term DebtNone
Common Stock1,799,976 shs.

its production capacity by purchasing a 314,500 square-foot facility in West Allis, Wisconsin.

Delving into the poor 1960 earnings period, we find that sales were off some 9% from the record level of the year before. The decrease was due primarily to lower takings by the lawn-mower and appliance industries, where demand contracted under the impact of the reduced pace of home construction. Shipments of locks and switches to the automobile trade should have benefited from the improved level of automobile production. While small price increases were effected on most engine models, costs could not be cut proportionally to the decline in sales. Thus, operating income was down 21%. With depreciation charges somewhat higher and other income down slightly, the decline in earnings before taxes was extended to 22%. After provision for Federal and state income taxes at 50.8%, compared with 53.3% in the earlier year, the decline in final net income was 18%.

So far in 1961 customers of

Briggs & Stratton continue to maintain a tight inventory position, but retail sales of products with BGG engines have begun to pick up. We believe this improvement will continue due to the upturn in the economy and that this should lead to higher BGG sales in 1961. First quarter results fell to \$1.29, well below those of the first quarter of 1960, when earnings reached \$2.06 a share, which was above any past quarter. After the first quarter, however, earnings should begin to improve significantly and we believe full-year earnings should compare favorably with the \$4.95 of 1959. The financial condition is strong. Dividend payments over the last 12 months were \$2.50. At 15 times a depressed year's earnings, the stock is, in our opinion, a distinctly undervalued growth situation of high quality with appeal for those seeking yield and better-than-average capital appreciation. It should be noted that although sales will be affected by changes in demand for end products using small gasoline engines, the growth trend is favorable be-

cause of the new uses being developed and the projected expansion in lawn mower production. Sales may also benefit from a growing replacement market for mowers and a steadily improving business in spare parts.

Greyhound Corp.

The coming of spring and summer invariably spurs the winter-confined average American into action, with travel well up on the list. This is usually beneficial for Greyhound Corp., which operates the nation's largest bus system.

Over the years, Greyhound has been a slow plodder, recommended primarily for income with gradual long-term growth. Developments within the company in the past two years call for a new appraisal of the company. Earnings last year, on a larger number of shares outstanding, matched the \$1.64 for 1959, and the \$1.00 dividend was supplemented with a 5% stock dividend in 1959 and a 10% stock dividend in 1960.

In addition to keeping earnings up, the company paid \$13 million in cash for 300 new buses last year and prepaid all 1961 installments of equipment obligations, totaling \$8.5 million. Despite these cash outlays, working capital at year-end was \$35.1 million, down only slightly from 1959. The company plans to pur-

chase some 265 additional new buses and 10 transit buses for \$11.9 million in cash.

The Greyhound system derives the bulk of revenues from bus operations, which are subject to ICC jurisdiction. Lines extend over 100,433 miles of routes throughout the United States and the more populated areas of Canada. Central, Eastern, Southern and Western Greyhound Lines are divisions of Greyhound Corp.

Of 1960 consolidated revenues totaling some \$323.5 million, 88.7% came from the bus division, 7.5% from restaurant sales, 2.5% from household moving and storage, and 1.3% from miscellaneous services. At the end of 1960, the system owned 5,214 buses. Bus miles operated totaled 481.5 million in 1960, a reduction of 4 million from 1959. This reflected continued elimination of low revenue producing operations. Average annual miles operated per bus were 94,536 compared with 92,784 in 1959. Revenue per bus passenger mile was 2.63¢ compared with 2.51¢ a year before.

In January, 1959, Greyhound sold its long-term car and truck leasing business to Commercial Credit Co. Pursuant to an agreement at the time of sale, Greyhound shares in any profits derived from Commercial Credit's Rent-A-Car operations, but does

GREYHOUND CORP.

Price	24
Dividend	\$1.00
Yield	4.1%
Traded	N.Y.S.E.

Capitalization	
Long-Term Debt	\$51,433,558
\$4.25 Cum. Pfd.	60,632 shs.
Common Stock	12,969,606 shs.

not have any loss liability.

In 1960, bus miles operated declined to 481.5 million, from 485.5 million a year before. However, aided by fare increases and higher volume in other services, revenues were up nominally. Operating expenses, depreciation allowances, and interest requirements combined increased 2% which cut pre-tax net 6.9%. However, lower taxes and the absence of the year-earlier \$1.6 million provision for net losses of Greyhound Rent-A-Car, permitted consolidated net income to increase nominally.

Earnings in coming months should be at an annual rate close to the \$1.64 a common share reported for 1960. Cash dividends are expected to continue at 25¢ quarterly. Passenger traffic in coming months may continue downward, but with increased business indicated for the company's other services, overall revenues should maintain a moderate upward trend. However, margins will depend importantly on the company's ability to secure additional fare increases to offset rising costs.

As to the longer term, the company should maintain a strong position in the transportation field, reflecting its relatively low fares, constant improvements in equipment and facilities, and its frequency of service. Moreover, greater earnings improvement may come from Greyhound's other services, particularly Package Express. Last November the company's Western Division extended its Package Express service into western Canada, with provision for on-the-spot processing of documents at the British Columbia border to insure continuous movement of merchandise to Canadian porters.

Summing up, Greyhound has streamlined its operations and cut down overhead. They've been using advertising aggressively, which seems to be paying off. Looking ahead, we can see earnings improving at a faster rate, and with the company's business being virtually recession-proof, the stock may command increased investor attention.

Pepsi-Cola

Our third stock is Pepsi-Cola,

The underlying causes of constipation are generally conceded to be atony of the bowel, biliary stasis, and the loss of excessive amounts of water from the stool. Stimulant laxatives effectively increase the muscular activity of the colon and promote return to regularity.

The hydrotropic action insures the formation and passage of normal stools. Stimulant laxatives effectively increase the muscular activity of the colon and promote return to regularity.

A balanced combination of digestant, cholaretic and stimulant laxatives can help to restore the normal pattern of elimination gently and physiologically.

Bile salts, the natural body laxative, increases the flow of hepatic bile, improving emulsification of fats and absorption of fat soluble vitamins.

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A balanced combination of digestant, cholaretic and stimulant laxatives can help to restore the normal pattern of elimination gently and physiologically.

in other words..

Caroid and Bile Salts Tablets correct constipation physiologically by aiding protein digestion, increasing the flow of bile into the gut, and stimulating peristalsis. Rx two tablets two hours after breakfast and at bedtime.

Caroid® & Bile Salts Tablets - digestant - cholaretic - laxative.

American Ferment Division, Breon Laboratories Inc., New York 18, N.Y.

which is the second largest maker of cola-type soft drinks and naturally benefits from the warmer weather which stimulates consumer thirst.

The company is engaged principally in the manufacture and sale of the concentrate used to produce the widely advertised "Pepsi-Cola" beverage. The concentrate is sold to franchised bottlers throughout the United States and in foreign countries. The syrup is sold to bottlers for distribution to fountain outlets, and it is also sold directly to national chain or multiple-outlet operations, and for use in automatic beverage vending machines. The company also makes liquid sugar, of which about half is used in its own operations and the rest is sold to industrial users.

In 1959, the company introduced Teem, a new lemon-lime drink, and in 1960, it introduced the Patio line of flavors in various individual markets.

The company has about 500 franchised bottlers in the United States and 237 franchised bottlers operating in 86 countries outside the U.S. and Canada. A Canadian subsidiary produces concentrates and sells to about 105 franchised bottlers. The principal foreign markets apart from Canada include Mexico, the Republic of the Philippines, Venezuela and the Union of South

Africa. Foreign sales currently constitute about 30% of the total sales volume.

Subsidiaries of the company bottle and sell Pepsi-Cola, not only in the U.S., but also in some foreign countries. Several foreign subsidiaries also make concentrate.

The company and its subsidiaries operate 24 concentrate and bottling plants in the U.S. and 34 in Canada and foreign countries. The main plant is at Long Island City, New York, and is equipped for bottling, sugar refining, and concentrate production.

Despite an unseasonably cool summer and the adverse effects of the recession, the number of cases the company sold in 1960 was the highest in Pepsi history, and dollar sales almost equaled the peak set in 1959.

Elimination of Cuban operations and currency devaluation in the Philippines reduced reported sales by some \$6 million. The cost of sales was somewhat smaller, but increased expenditures for advertising and sales promotion contributed to the increase in other costs, and operating income declined 7.3%. A gain in other income was more than offset by a rise in the total of depreciation, interest and other charges, extending the drop in net before taxes and adjustments for foreign activities

PEPSI-COLA

Price	52½
Dividend	\$1.40
Yield	2.7%
Traded	N.Y.S.E.

Capitalization	
Long-Term Debt	\$20,572,535
Common Stock	6,495,955 shs.

to 9.5%. After U.S. and foreign taxes at 50.0%, as against 49.1%, and a credit of \$423,481 against a charge of \$1,490,517 for foreign activities, final net was up 2.2%.

Sales prospects for this year are favorable, with the extent of the prospective improvement depending to some extent on the weather during the important summer months. Advertising and promotional activities will be at record levels, the distribution network has been enlarged and sales through vending machines and fountain outlets are being expanded vigorously. Benefits should also derive from wider distribution of the line of flavors introduced in 1960 and the lemon-lime drink, now two years old.

Although advertising and related expenditures will be higher, and further expansion moves will add to total costs, the larger volume in prospect favors earnings improvement over the peak \$2.28 a share of 1960, which compared with \$2.17 in 1959. Dividends are expected to hold at 35¢ per share quarterly.

Over the long term, domestic expansion is being furthered by the construction of numerous bottling plants by franchised bottlers in the U.S., while considerable progress is being made in opening new profitable areas abroad.

During 1960 Pepsi bottlers built nine bottling plants in the U.S. and expanded plant facilities at 40 locations; 25 new plants are now under construction or planned for completion this year. Forty new plants were opened abroad in 1960, making a total of 237 plants serving 86 countries and territories, excluding the U.S. and Canada. Plans call for 38 new plants overseas this year.

Pepsi strikes us as an excellent growth stock, with its recent record of steadily rising sales and earnings attesting to its strength. Dividends have been increased six times since 1952. Continuation of the gradual growth pattern is likely and the shares are a sound commitment for this purpose.

Distillers Corp.—Seagrams

Our final stock is Distillers

Corp.-Seagrams, a liquor company, which is more of an all-year-round seller than the other three companies. However, the more expansive social activity usually occasioned by the warmer weather serves to stimulate sales.

The company represents a good value at 11 times estimated fiscal 1961 earnings of about \$3.50 per share, up from \$3.23 for 1960. Recent interest in the liquor group is the result not only of fairly recession-resistant characteristics, but also of brighter earnings prospects following several favorable changes in industry factors. Commitments in DCS, largest of the distilling companies, are encouraged for capital gains with minimum downside risk. The \$1.70 dividend provides a yield of about 4½%.

Although the company is a Canadian firm, over 90% of volume is sold in the U.S. Leading brands include Seagrams 7 Crown, Calvert Reserve, Carstairs, Four Roses blend, and Four Rose Antique Bourbon. Bourbon is a fastcomer in the liquor industry, and DCS has recently embarked on a \$2 million advertising campaign to promote its entry into this field.

Distillers Corp.'s diversified interests include investments in several oil and gas operations

and a pharmaceutical division, Pharma-Craft, which produces proprietary drugs and deodorants sold under the brand names Coldene, Fresh, and Ting. So far this drug subsidiary has contributed little in the way of earnings, but the company feels that future potential here is good.

Losses on oil ventures have actually been somewhat of a drain on earnings, and have cost a total of about \$1.50 per share since 1956; but, oil deficits recorded have declined sharply and in fiscal 1960 amounted to a mere 4 cents per share, as opposed to 7¢ a year earlier. There is, of course, always the possibility that drilling operations will turn around and begin to contribute to earnings.

For the past decade, the distilling industry has suffered from over-capacity, excessive taxes, and the ill effects of bootlegging, as well as an almost static volume. Particularly hard-hit have been the large distillers who had reached peak sales and earnings levels immediately following the war by capitalizing on a consumer preference for blended whiskey. Public taste shifted to straights, however, and most of the growth in the industry was experienced by smaller and new firms, who concentrated on the straights and who made wide inroads into the market with a

DISTILLERS CORP. - SEAGRAMS

Price	38¼
Dividend	\$1.70
Yield	2.7%
Traded	N.Y.S.E.

Capitalization	
Long-Term Debt	\$98,483,670
Common Stock	8,725,750 shs.

single brand or two. These firms had the happy problem of building up their inventories while the large companies, with excess capacity, were plagued by the difficulties or trying to bring inventory reserves into better balance and diversifying their product mix.

Earnings of Distillers Corp. reflected these troubles, as shown by the decline in per share figures from \$4.93 in 1951 to \$2.63 in 1956. But since then, the company has turned its earnings trend around and has re-established rather smart year-to-year gains. Earnings have scored steady gains since their low points in 1956, and half-year results for fiscal 1961, showing an 8.1% increase to \$1.88 per share over the \$1.74 recorded for the like 1960 period, make our \$3.50 estimate for the year seem well within reach. Moreover, we expect an additional 25¢ per share in the undistributed earnings of nonconsolidated subsidiaries.

Growth is expected to continue, bolstered by the prospect of population increases in those age groups where the heaviest

drinking occurs, continually rising personal income and steadily increasing leisure time. Moreover, industry profits will be enhanced by changes in the method of collecting excise taxes which permits companies to pay these levies twice monthly instead of daily, thus reducing the amount required to finance advance tax payments, and by the passage of the Forand Bill, which allows distillers to keep whiskey in bond for 20 years (previously 8) before the excise tax must be paid. Forced disposal of excess inventories is thus avoided and a more orderly and stable market created.

The financial condition of the company is very strong and the current ratio at July, 1960, stood at 5.8-1. Even excluding inventory value, current assets were more than two times the current liability figure. At 10 times total earnings, the shares of Distillers Corp. are a sound investment in a substantial company with a better-than-average yield. The stock is recommended for current income and both intermediate- and long-term gain. ◀

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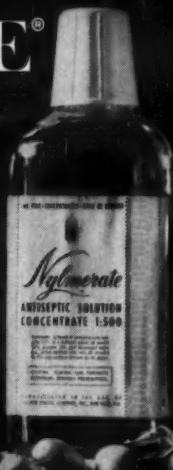


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Active Ingredients: Polyoxyethylenesulphonphenol 0.36%, Boric Acid 1.9%, Phenylmercuric Acetate 0.02% in a gum base with pH adjusted to 4.



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More effective than vinegar, Nylmerate Antiseptic Solution is ideal for therapeutic and prophylactic use as a vaginal douche.

Simple to use: One capful in two quarts of water. Prescribe in pint bottles.

Active Ingredients: Phenylmercuric Acetate 0.2% in a buffered Scept of Alcohol 50%, Acetone 10% and de-ionized water q.s., added certified color with pH adjusted to 4.9.

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The Doctor and His Federal Income Tax

Prepared monthly for the readers of Clinical Medicine by Sydney Prerau, Director, the J. K. Lasser Tax Institute, Larchmont, New York

► Another warning on physicians' tax-guided investments ◀

Two Texas physicians unfortunately learned they could not rely on a favorable Treasury ruling when it was not addressed to them. The Treasury is not bound by a letter ruling to anyone other than the addressed taxpayer. This is so even if an individual enters into a transaction relying in good faith on that ruling. Moreover, the Treasury may withdraw a private ruling retroactively. If a tax ruling on a particular state of facts is needed, one addressed to the individual on the facts in the particular situation should be obtained.

Two doctors (one now deceased) were associated with a county hospital foundation in Texas. In December 1952, agents of a life insurance company approached the doctors and tried to sell them single premium annuity contracts on credit. They advised the doctors that by buying

single premium annuities from their company with funds borrowed from the company, they could convert into capital assets funds they would otherwise have to pay out on Federal income taxes. They represented that although for the first 8 years interest on the loans would be greater than the annual increase in the cash value of the annuity, they could deduct the interest. The tax saving from this interest deduction would actually result in a profit to the doctors. They advised further, that in the ninth and succeeding years, the annual increase in the guaranteed cash value of the annuity savings bonds would be greater than the interest paid on the initial loans, exclusive of any interest paid if the doctors borrowed against increases in such cash value.

In their sales promotion, the agents showed the doctors a letter dated August, 1952, from the Treasury addressed to the presi-

dent of the insurance company, saying that interest paid on money borrowed for partial payment on a single premium annuity contract is deductible as an interest expense. The doctors did not seek a Treasury ruling for themselves. Relying on the letter to the president, in January, 1953, they each purchased an annuity savings bond from the insurance company in the amount of \$200,000. They would not have bought these bonds if they did not believe the annual payments for interest were deductible.

In November, 1953, the Treasury advised the president of the insurance company that it had received a number of inquiries as a result of the ruling addressed to him; that it was considering revoking such ruling, and warned against any reliance on it. The doctors did not know of this letter. The Treasury later revoked its August, 1952 ruling, effective as of November, 1953.

In their income tax returns for 1953, 1954, and 1955, each doctor and his wife claimed deductions for approximately \$22,500 as interest paid on the loans for each annuity. The Treasury disallowed the deductions of each, and the Tax Court affirmed. The Court said it must follow the Supreme Court decision which denied the deduction of in-

terest paid on single premium annuity bonds purchased with borrowed funds. It holds that the letter to the insurance company president does not take the doctor's case out of the Supreme Court rule. The Treasury ruling was not directed to the doctors.

► *Specific insurance coverage of overhead expenses supports deduction of premiums* ◀

Disability insurance premiums may be deductible by a physician as business expenses. However, the Treasury will check the policy to see that it has a specific provision covering the payment of overhead expenses. Absence of such a provision will lose the deduction. The physician cannot deduct premiums paid on a policy that merely reimburses him for loss of income while he is disabled. The insurance proceeds must be earmarked for payment of business expenses.

► *Value of women's medical history charts to gynecologist* ◀

A doctor cannot be allowed depreciation on service contracts which he bought from a retiring physician, said the Tax Court recently, because the value and the life of such contracts, terminable at will, is incapable of being estimated.

Now the District Court in Texas holds that a doctor may be al-

lowed to depreciate the cost of patients' charts, which he bought from a retiring obstetrician-gynecologist, showing medical histories of patients. In 1955, a physician bought all the personal property used by a retiring physician in his practice as obstetrician and gynecologist in Texas. The sale included furniture, medical supplies and equipment, and about 5000 charts of patients. The part of the purchase price allocated to the charts was \$25,000. The retiring physician estimated the charts to be of value for approximately five years, and the value to be \$1 each a year, basing his estimate on these facts: The town where he practiced is an oil town. The population is a transient one. There are only six doctors in the town whose practice is limited to gynecology. The charts are of value only if patients of the retiring physician would come to the new doctor and in such event there would be a saving of about \$30 in time to the purchaser (in obtaining medical history) for which he could not charge. Women ordinarily have their babies within a relatively short period of years. If a woman does not return within five years after the purchase of the charts, the chance of her returning at all is remote.

The charts were actually use-

ful to the purchaser and his associates, but by 1957 had practically exhausted their usefulness. The purchaser felt that a fair and realistic period of usefulness is six years. The Treasury disallowed him any depreciation, and he brought this action seeking a refund on the taxes he was compelled to pay for the disallowed depreciation. The District Court overrules the Treasury, and finds for the doctor, as follows: The charts were used in the purchaser's medical practice and are subject to an allowance for depreciation. There was necessarily some non-depreciable good-will attached to the charts. This is found to be 10%, and to the extent of \$2500, no depreciation is allowed. Depreciation is allowable for property used in a business if shown to have a useful life for a limited period of time in the taxpayer's business or in the production of his income. This limited period need only be estimated with reasonable accuracy. Depreciation allowances are not limited to tangible property. Here the limited life of each chart is found to be six years, and the purchaser is allowed a depreciation of \$3750 for each of six years (aggregating \$22,500).

►Series E Bonds extended◄

Series E bonds can be cashed for what you paid for them plus a fixed increase in value. This in-

crease is taxed as interest and you can find the rate of increase in the table on your bond certificate. You need not report on the annual increase in value on your E bonds until they mature or you cash them in. Although this is the alternative, you can report the annual increase each year. Most individuals, however, do not report as income the annual increase in E bond value. They prefer to postpone the tax until later years.

Physicians holding E bonds are now being given another extension on their maturity dates. This can be beneficial for the further postponement delays the cashing in process. When the bonds are cashed in after a physician's retirement from active practice, his income is normally lower which means that his tax rate is decreased. Picking up income in low tax years and paying a lower tax is obviously advantageous.

Treasury announces that the maturity of Series E bonds issued between 1941 and 1949 will be extended for another 10 years when the last 10 year extension terminates in May, 1961. The bonds thereafter will carry a straight 3¾% interest rate for the entire 10 year extension period. This interest rate is up from the 2.9% in the first 10 years and the graduating 2.9%-3.4% of the first extension period. This new

rate is the same as the U.S. is paying on new savings bonds.

► *Estate tax aspects of owning property jointly* ◀

Owning property jointly with one's wife looks attractive. It is easy to arrange. Just have both names listed in joint ownership. And on the death of one, the surviving spouse is bound to get the property.

Jointly held property is property of any kind that you and one or more persons own jointly with the right of survivorship. If one owner dies, the survivor or survivors take all. You cannot leave your share to someone else in your will. Your share automatically falls to the surviving owners regardless of what your will says about it. Common examples of jointly held property are: real estate held in the names of two or more persons as joint tenants or by husband and wife as "tenants by the entirety"; checking accounts and U.S. Savings Bonds registered in the names of co-owners.

Like life insurance, jointly owned property is popularly believed to be exempt from estate tax because the property goes to the wife automatically. However, the Federal tax rule is that it is a part of the estate of the first-to-die if he paid for the property with his own money. Further-

more, the entire value of the jointly held property is included in the gross estate of the first-to-die unless the executor can prove the survivor (wife) contributed some of her own money towards the purchase of the property. And her own money does not include money that was given to her by the husband. It means money or property that was originally hers and the executor has to prove that such contribution was made by the surviving owner. Frequently a husband and wife pool their money in buying a family home, or savings bonds, property or other investment. This makes the job of tracing any part of the purchase price to either of them in later years almost impossible.

If you have been induced to buy or own property jointly with your wife or your children because of simplicity, consider the estate tax implications of jointly held property. A chat with your lawyer may be enlightening.

►Tax-favored pension plans for doctors◄

Physicians have had two strikes against them for some time in their quest for tax-favored retirement allowances. They are excluded from Social Security coverage, and generally they cannot incorporate to take advantage of tax qualified pen-

sion plans. The now famous *Kintner* case held that doctors could form an association for income tax purposes. They could then participate in the association's retirement or pension plan for employees.

The Treasury's reaction to the *Kintner* decision was looked for with great anticipation. It came in the form of new Regulations. But for doctors, the regulations were disappointing. Here is why: The Treasury sets forth those corporate characteristics which must exist in an association so that it might be treated as a corporation tax-wise. But, although the tax law establishes the standards determining whether an organization is a partnership or an association, it is local law which determines whether a professional group could be considered an association. A professional partnership operating in a state which has adopted the Uniform Partnership Act might find it impossible to convert to an association. In a corporation there are the characteristics of free transferability of interests, continuity of life, centralization of management and limited liability of members. Such characteristics are difficult, if not impossible, for doctors to have in an association under the Uniform Partnership Act.

The Treasury gives two exam-

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Supplied: Nicozol Complex, a pleasant tasting elixir, in bottles of 1 pint and 1 gallon.

Dosage: One teaspoonful (5 cc.) three times daily, before meals. (Female patients should follow each 21 day course with a 7 day interval without Nicozol Complex.)

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Riboflavin	3 mg.
Pyridoxine Hydrochloride	6 mg.
Vitamin B ₁₂	2 mcg.
Folic Acid	0.33 mg.
Panthenol	5 mg.
Choline Bitartrate	20 mg.
Inositol	15 mg.
L-Lysine Monohydrochloride	100 mg.
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Iron (as Ferric Pyrophosphate)	15 mg.
Trace Minerals as: Magnesium	2 mg.
Manganese	1 mg.; Zinc 1 mg.

ples of partnerships of doctors that might seek qualification of associations taxable as corporations and tells how they would be treated:

Example 1. Seven doctors form a medical clinic. Each transfers assets to it. The agreement provides that no doctor has any individual interest in clinic assets except upon liquidation, by a $\frac{3}{4}$ vote. Neither death, insanity, bankruptcy, retirement, resignation or expulsion of any member will cause dissolution. Clinic management is vested in an executive committee of four, who are elected by the seven. No doctor has the power to bind the clinic without the authority of the committee. The doctors are personally liable for all debts or claims against the clinic. Each doctor may transfer his interest to a non-member doctor, but must first give the clinic the opportunity, on vote of a majority of members, to purchase his interest at fair market value. These provisions are acceptable under local law.

This clinic is an association, says the Treasury. In addition to associates and an objective to carry on the operation of the clinic, it has the corporate characteristics of centralized management, continuity of life, and a modified form of transferability of interest. Only the corporate

characteristic of limited liability is missing. The association is taxable as a corporation.

Example 2. The factual situation is similar to Example 1, except for the following: A doctor who withdraws from the association has the power to dissolve the clinic under local law. Any doctor-member acting on clinic business binds the clinic as to outsiders who believe he has authority to act for the clinic. No doctor has the right to transfer his interest to a non-member doctor without the consent of all the other members. While each doctor alone is liable for his acts of malpractice, all members are liable for all debts of the clinic including claims based on malpractice.

This clinic, says the Treasury, is taxable as a partnership. It lacks the corporate characteristics of continuity of life, centralized management, limited liability, and transferability of interest.

Only 12 states have not adopted the Uniform Partnership Act. Even in these states conversion may not be possible. For example, the Attorney General in Florida has ruled that a medical partnership cannot convert to a medical association in Florida. South Dakota and Arkansas have taken legislative action to secure tax-protected pen-

sions for their doctors. In South Dakota, three or more doctors practicing in partnership may now form a special "medical corporation" which would be treated as a private corporation in that state. In Arkansas, two or more doctors may form such a medical corporation. In Indiana and Minnesota, proposed legislation would permit such conversion by physicians and other professional partnerships.

The inevitable litigation and impending problems over the application and construction of these Regulations would be reduced to a minimum for professional persons who want to provide for their own retirement under tax favored plans if Congress would enact a satisfactory self-employed persons' retirement bill. A new version of such bill is now pending in Congress, and it is to be hoped that it will meet a happier fate than its predecessors met in past sessions.

► *A charitable foundation for a physician* ◄

The advantages of a foundation are not reserved for the multi-million fortunes alone. Doctors, lawyers and business men, along with the Fords and Rockefellerers have established family foundations. An individual with a substantial income may be able to accumulate sig-

nificantly more dollars in a foundation than in a trust or personal portfolio. Before you consider creating such a foundation you should ask yourself this: Is there some activity, scientific, educational, research, charitable, or religious to which you might want to devote yourself later on, or in which your wife or children might want to engage? Is your interest in one or more of such activities strong enough to move you to create a foundation and to put money into it? If so, you then determine how much you can invest and accumulate in a foundation.

You have this advantage to start with—the foundation because of its charitable purpose, gets tax privileges. It can conserve assets and build up funds more easily than can an individual or a profit-making corporation.

What is a foundation? It is a private non-profit organization. It accumulates its own funds, and it uses income and principal for charitable purposes. Its charter must provide that no part of its funds are to benefit anyone except a scientific, educational, religious, etc. group. Also, that it will not carry on any activities to influence legislation or carry on propaganda.

Doctors have established foundations for research purposes in

specific areas, as, for example, the study of arterial disease. The properly organized foundation pays no Federal taxes, yet its activities may be under full control of the individual who creates it. With present day income and estate tax rates, the foundation is one of the last resorts available permitting the diversion of capital to sources of one's own choosing.

The bulk of your estate may, for example, be tied up in real estate holdings. Your estate might have to sell a considerable part of the real estate to pay estate taxes. You would like your family to remain in control of the real estate. A foundation can bring this result. You create a foundation dedicated to some medical or scientific research purpose. You make a gift of some of the real estate to the foundation—until the value of your estate is reduced to the level at which it can pay the estate tax which will be due on the remaining assets. You place the foundation under the family's direction, and the family keeps control of the properties. If the properties have appreciated in value, you save tax on the appreciation. You

get an income tax deduction for your contribution, at the increased value, and you avoid heavy estate taxes payable on death.

The foundation can keep income in the family by paying compensation for services to members. Only *reasonable* compensation is allowed. It can sometimes receive funds subject to payments to the family. All your interests in the property need not be given away. You can retain a life interest, or reserve a life estate for a dependent with a remainder interest to the foundation. Or you can donate property subject to an annuity for one or more lives.

The foundation can be used to channel your charitable giving. It can protect you from the avalanche of charity requests that come to you from innumerable sources. You can pass these requests on to the foundation.

There are, of course, certain ground rules Congress has established against diversion of funds to family foundations. If you consider creating a foundation, your attorney's advice should be sought and the rules carefully examined. ◀

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►Deluteval 2X (Squibb)

Each cc. contains 250 mg. of hydroxyprogesterone caproate and 5 mg. of estradiol valerate. *Indications:* For the treatment of endometriosis. Also affords a well tolerated means of restoring normal ovarian function in disturbances of the menstrual cycle as well as being useful in certain infertility problems. *Dosage:* To be individualized. *Supplied:* In 5 cc. vials.

►Soma Compound Tablets (Wallace)

Each tablet contains 200 mg. of carisoprodol, 160 mg. of acetophenetidin and 32 mg. of caffeine. *Indications:* For relief of pain in headache, toothache, neuralgia, myalgia, and dysmenorrhea. For relief of chronic and traumatic pains and stiffness in sprains and strains, for relief of pain and stiffness, and for the reduction of fever in rheumatic conditions, colds, and upper respiratory infections, and for other conditions in which pain, stiffness and fever are symptoms. *Dosage:* Usual adult dose is one or two tablets daily and at bedtime. *Supplied:* In bottles containing 50 tablets.

►Librax Capsules (Roche)

Each capsule contains 5 mg. of Librium hydrochloride and 2.5 mg. of Quarzan bromide. *Indications:* For control of hypersecretion, hypermotility, and emotional factors associated with peptic ulcer (duodenal, gastric, and marginal) as well as other gastrointestinal disorders, anxiety states with gastrointestinal manifestations, pylorospasm, cardiospasm, and other functional or organic disorders of the digestive tract. *Dosage:* Usual adult dose is one or two capsules four times a day before meals and at bedtime. *Supplied:* In bottles containing 50 or 500 capsules.

►Dexalone Dura-Tabs (Wynn)

Anti-obesity formula, available in two strengths: *Dexalone 10 Dura-Tabs* contain 10 mg. of dextroamphetamine sulfate. *Dexalone 15 Dura-Tabs* contain 15 mg. of dextroamphetamine sulfate. *Indications:* To curb appetite, brighten mood, and ease tension while losing weight. *Dosage:* One long-acting tablet before breakfast. *Supplied:* In bottles containing 30, 100 or 250 tablets.

new drugs

►VoSol HC Otic Solution (Wampole)

Non-aqueous solution of 1,2-propanediol diacetate, 3.0%; acetic acid, 2.0%; benzethonium chloride, 0.02%; hydrocortisone, 1% in a propylene glycol vehicle. *Indications:* For full spectrum against all organisms found in otitis externa plus anti-inflammatory action to reduce swelling and relieve itching and pain. *Dosage:* To be individualized. *Supplied:* In 7.5 cc. measured-drop, safety-tip plastic bottles.

►Bronkotabs (Breon)

Antiasthmatic. Each tablet contains 100 mg. of theophylline, 24 mg. of ephedrine sulfate, 8 mg. of phenobarbital, 10 mg. of thenyldiamine hydrochloride, and 100 mg. of glyceryl guaiacolate. *Indications:* For prevention or relief of the symptoms of bronchial asthma, asthmatic bronchitis, chronic bronchitis with emphysema, emphysematous bronchospasm. Also for relief of bronchial asthma associated with hay fever, allergic rhinitis and nonseasonal upper respiratory allergies. *Dosage:* Adults—patients will vary in their requirements; however, a dosage schedule of one tablet given every three or four hours, not to exceed five times daily, will

usually afford maximum relief. Children over six years of age, one-half the adult dose. *Supplied:* In bottles containing 100 tablets.

►Tigacol Capsules (Roche)

Each capsule provides 50 mg. of *Roniacol* (vasodilator) and 100 mg. of *Tigan* (specific for the prevention and control of nausea and vomiting). *Indications:* To relieve dizziness, especially when associated with impaired cerebral circulation, Ménière's syndrome or disorders of the labyrinth, and nausea and vomiting which are often associated with dizziness. *Dosage:* Suggested dosage is one or two capsules three times a day. *Supplied:* In bottles containing 50 capsules.

►Haldrone Tablets (Lilly)

Available in two strengths: Each tablet contains either 1 mg. or 2 mg. of paramethasone acetate. *Indications:* Collagen diseases, allergic diseases, dermatologic disorders, hematologic diseases, nephrotic syndrome, gout (initial therapy), ulcerative colitis, adrenogenital syndrome, sarcoidosis, bursitis, pulmonary emphysema, and regional ileitis. *Dosage:* To be individualized. *Supplied:* Either strength, in bottles containing 30 or 100 tablets.

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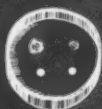
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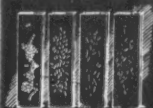
in common lower urinary infections



controls urinary infection without producing resistant mutants



relieves urinary pain in 30 minutes



effective against most urinary pathogens



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sensitization and other systemic reactions do not develop



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Composition: Each Azo-Mandelamine tablet contains 50 mg. phenylazodiamino-pyridine HCl (Pyridium®) and 500 mg. methenamine mandelate (Mandelamine®). **Average Adult Dosage:** Two Azo-Mandelamine tablets four times a day. **Precautions:** Azo-Mandelamine is contraindicated in patients with renal insufficiency and/or severe hepatitis. An occasional patient may experience gastrointestinal disturbance. Full dosage information, available on request, should be consulted before initiating therapy.

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►Isordil with Phenobarbital Tablets (Ives-Cameron)

Each tablet contains 10 mg. of isosorbide dinitrate with 15 mg. ($\frac{1}{4}$ grain) of phenobarbital. *Indications:* For the prevention of angina pectoris and the treatment of coronary insufficiency, particularly when anxiety and emotional disturbances are prominent factors in the clinical picture. *Dosage:* Average dosage for the majority of patients is one tablet four times daily, before meals and at bedtime. Dosage to be adjusted to the severity of the condition and response of the individual patient. *Precautions:* As with all nitrates, this medication should be given with caution to patients having glaucoma. *Supplied:* In bottles containing 100 tablets.

►Lyophrin Sterile Ophthalmic Preparation (Alcon)

Sterile lyophilized preparation to be reconstituted as a 2% solution at the time of dispensing. Active ingredient is l-epinephrine bitartrate. *Indications:* Chronic simple glaucoma. *Precautions:* Should not be used in cases of angle closure (narrow angle) glaucoma. Gonioscopy is advised on all patients before use in order to avoid an angle-block incident. *Dosage:* For best results

the dosage should be adjusted to meet the requirements of the individual patient. Topical application of one drop in the eye(s) will often result in a decrease in tension within one hour, and maintain a lowered intraocular pressure for a 24-hour period. Medication is best administered at bedtime to avoid the slight disturbances in vision due to the dilatation of the pupil. *Supplied:* Unit package contains one vial of sterile lyophilized l-epinephrine bitartrate (100 mg.) and a 5 cc. bottle of diluent.

►Bronkometer Oral Nebulizer (Breon)

Antiasthmatic pocket-size aerosol. Each nebulizer contains 0.6% isoetharine, 0.125% phenylephrine hydrochloride and 0.05% thetyldiamine hydrochloride. *Indications:* For relief of bronchial asthma and other conditions in which bronchospasm is a complicating factor, such as emphysema, bronchitis, or other chronic broncho-pulmonary disorders. *Dosage:* Average dose is one to two inhalations. Occasionally more inhalations may be required, in which case a full minute should elapse to determine the effect of the first one or two inhalations. *Supplied:* In 10 cc. vials complete with measured dose valve and oral nebulizer.

► **Principles of Surgical Practice**

by Emanuel Marcus, M.D., Ph.D., Professor of Surgery, The Chicago Medical School; and Leo M. Zimmerman, M.D., Professor and Chairman, Department of Surgery, The Chicago Medical School. The Blakiston Division, McGraw-Hill Book Company, Inc., New York. 1960. \$12.50

Up to some 50 years ago, every medical school had a professor and a textbook of Principles of Surgery. The text our class studied was by the famous surgeon, Nicholas Senn. It seems that nowadays these principles are not generally taught in a separate course or in a separate book, but are to be found scattered over various courses, laboratory and clinical. The authors reason that, since undergraduate instruction cannot make the student a surgeon, matters of technique should be of no value to him, and that he should be instructed in the principles underlying surgery, these principles being mostly restatement of basic facts of anatomy, physiology, microbiology, chemistry and pathology, as they are applied in understanding the diseases called

surgical. A valuable book written after this plan, largely for the undergraduate student and the practitioner, is now offered.

► **Handbook of Medical Treatment**

edited by Milton J. Chatton, M.D., Assistant Clinical Professor of Medicine, University of California (San Francisco), and Stanford University Schools of Medicine, Palo Alto; Sheldon Margen, M.D., Associate Research Biochemist, and Clinical Instructor in Medicine, University of California School of Medicine (San Francisco); and Henry Brainerd, M.D., Professor of Medicine, University of California School of Medicine (San Francisco). Seventh edition. Lange Medical Publications, Los Altos, California. 1960. \$3.50

Through all its editions over a dozen years, this book has served the purpose for which it is intended, that of supplying those who do not have time to consult exhaustive works with authentic information on advances in knowledge of treatment of disease.

► **Treatment of Cardiovascular Emergencies**

by Aldo A. Luisada, M.D., Associate Professor of Medicine, Chicago Medical School; and Leslie M. Rosa, M.D., Assistant Professor of Medicine Chicago Medical School. The Blakiston Division, McGraw-Hill Book Company, New York. 1960. \$4.95

The frequency of such emergencies and the necessity for the prompt institution of treatment measures make such a book highly needful.

► **Documenta Ophthalmologica: Advances in Ophthalmology**

edited by G. von Bahr, Uppsala; G. B. Bietti, Rome; J. ten Doesschate, Utrecht; H. Fischer-von Bunau, Utrecht; J. Francois, Ghent; H. Goldmann, Bern; H.K. Muller, Bonn; Jean Nordmann, Strasbourg; A. J. Schaeffer, Los Angeles; Arnold Sorsby, London. Vol. XIV, Dedicated to M. Amsler, Zurich, Uitgeverij Dr. W. Junk, 13 Van Stolkweg, The Hague, Netherlands. 1960.

This book is made up of the contributions of participants in a Symposium on Uveitis, held at Munich in 1959. The articles are written by ophthalmologists, a dozen from Europe and three or four South American countries,

and a number of the United States. The articles are written in German, French, Spanish, and English. Of those written in languages other than English, a summary of each is supplied in English. This is a very learned work which should fall into the hands of a scholarly, polylingual ophthalmologist, such as was Dr. George deSchweinch.

► **The Management of Fractures and Soft Tissue Injuries**

by a Committee on Trauma, American College of Surgeons, based on An Outline of the Treatment of Fractures, Seventh edition, and Early Care of Acute Soft Tissue Injuries, Second edition. W. B. Saunders Company, Philadelphia and London. 1960. \$5.00

This book should be welcomed and made use of widely by doctors generally who see no need for referring every case of fracture or soft tissue injury to a surgical specialist. Its being compiled and offered by a committee of the American College of Surgeons may well be accepted in court as an authorization to a general practitioner as qualified to treat a great number of such injuries, in case the practitioner is sued at law when a less than perfect result is obtained.

► **Clinicopathological
Conferences of the
Massachusetts General
Hospital: Selected
Medical Cases**

by Benjamin Castleman, M.D., Chief, James Homer Wright Pathology Laboratories, Massachusetts General Hospital, Clinical Professor of Pathology, Harvard Medical School; and H. Robert Dudley, Jr., M.D., Assistant in Pathology, Massachusetts General Hospital, Instructor in Pathology, Harvard Medical School. Little, Brown and Company, Boston. 1960. \$12.50

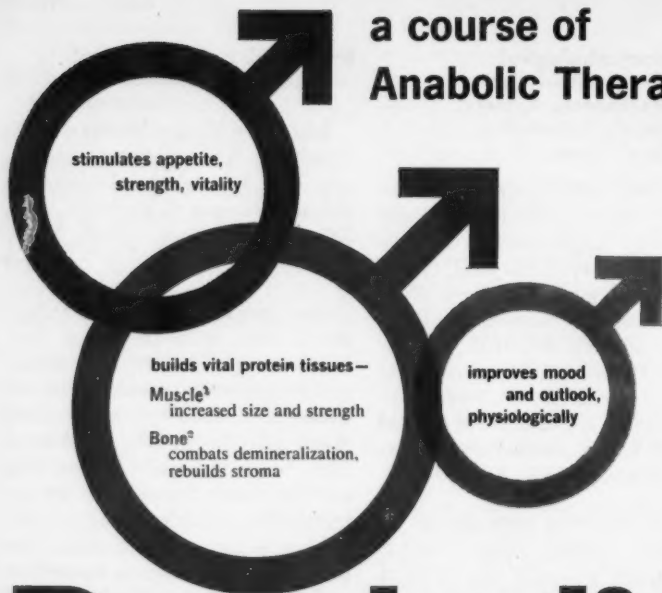
As all but the very young in medicine know, these Conferences were begun by Dr. Richard Cabot more than 50 years ago and their proceedings have been continued and published in *The New England Journal of Medicine*. It is but a modest claim that these records are widely regarded as an integral part of medical education. This reviewer is gratified to learn that the idea of these conferences germinated in the mind of the great physiologist, Walter B. Cannon, when he was a student in the Harvard Medical School. In response to many requests for publication of these cases in book form, 50 cases dealing with problems of special importance in the field of internal medicine have been selected for this publication.

► **Medical and Biological
Research in Israel**

edited by Moshe Prywes, Published by The Hebrew University of Jerusalem. Obtainable through Grune & Stratton, Inc., 381 Fourth Ave., New York. 1960. \$8.00

One might well have anticipated that, with the great flow of Jewish scholars to Israel, much valuable research in all fields of science would be done there and the results published. This thick volume testifies that such has been the case. In the introduction a background is laid, the institutions identified and the medical and biological education in Israel outlined. Under public health and social medicine we read about social structure, control of communicable diseases, mental health, nutritional problems and organization of medical care. Much of research has been done in agriculture, irrigation, pastures, forestry, and plant diseases and insect pests. Animal husbandry has had much attention. Experimental biology and clinical research has been very productive. Neither botany nor zoology has been neglected. This 500-page book is an astounding revelation of what a determined, highly-intelligent and well-educated people can do under extremely adverse circumstances.

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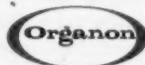
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to improve mood and outlook; restore appetite, strength and vitality; relieve pain; stimulate gain in solid muscular weight; hasten recovery. Your patient *feels* better because he *is* better.

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1. Osol, A. and Farrar, G. E., Jr.: The Dispensary of the U.S.A., ed. 25, J. B. Lippincott, Phila., 1955, p. 1392. 2. Best, C. H. and Taylor, N. B.: The Physiologic Basis of Medical Practice, ed. 7, The Williams and Wilkins Co., Balt., 1961, p. 1104.



Organon Inc., W. Orange, N. J.